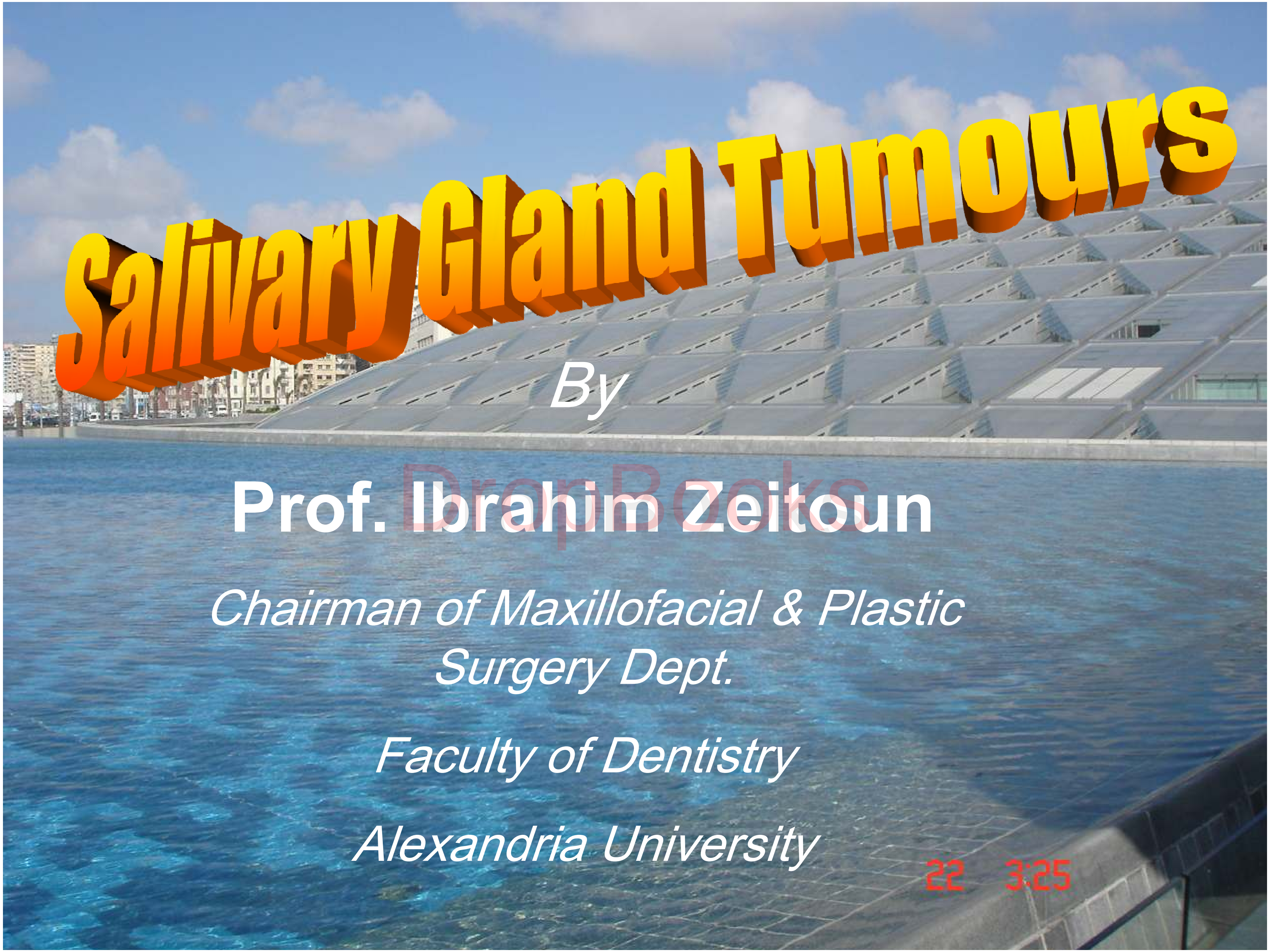

Salivary Gland Tumours

By

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Faculty of Dentistry

Alexandria University

Salivary Gland Tumours

- **They are either:
- 1) Epithelial a-myoepithelial
- b-acinar
- c-ductal
- 2)Mesenchymal

**They are either:

a-Benign

b-Malignant

- The smaller the gland , the more the tumour to be malignant

Incidence

- Salivary gland tumours → 75% Benign
  → 25% Malignant
- Parotid → 85% (20% malignant)
- Submand. → 11% (30% malignant)
- Minor gland → 3% (40%malignant)
- Subling. → 1% (90%malignant)
- Benign mixed tr.: Commonest by far
- Mucoepidermoid Ca : Commonest malig.
- Adenoid Cystic Ca. : Common in submand. gl.
  & minor glands

Diff. Diagnosis of Parotid Tumours

Character.	Benign	Malignant
Duration	*long*	*short*
Rate of Growth	*very slow*	*rapid*
Size	*large*	*smaller*
Pain	*---------*	*+*
Facial palsy	*---------*	*+*
Tenderness	*---------*	*+*
Consistency	*soft to firm*	*stony hard*
Mobility	*Mobile*	*often fixed*
L.N.s	*---------*	*+ or -*

Histological Classification

- Adenomas
  - -Benign mixed tumour (Pleomorphic adenoma)
  - -Monomorphic adenomas
    - i Basal cell adenoma
    - ii Canalicular adenoma
    - iii Myoepithlioma
    - iv Sebaceous adenoma
    - v Oncocytoma
    - vi Papillary cystadenoma lymphomatosum
  - -Ductal Papillomas
    - i Sialdenoma papilliferum
    - ii inverted duct papilloma
    - iii intraduct papilloma

Benign Mixed Tr. (Pleomorphic Adenoma)

- *It is the most common in major and minor salivary glands*

Parotid	*85% of these tumours*
Submand.	*8%*
Minor Gl.	*7%*

- **Histology:**
- *It has a wide spectrum of characters ; It is formed of epith. And mesenchymal elements, the epith. elements may show some metaplastic changes in the form of squamous or sebacous changes .the mesenchymal elements may appear as myxoid , chondroid , hyaline or even adipose or osseous tissues (Pleomorphism)*
- *The tumour is surrounded by a limiting compressed fibrous connective tissue pseudocapsule which shows islands of tumour tissues in the form of satellites.*

- **Clinical Picture:**
- *These tumours constitute 50% of all intraoral minor salivary gland tumours, they favor the palate , the upper lip and the buccal mucosa . They present as painless, firm , mobile , slowly growing masses without neck nodes . The facial nerve is intact .*
- **Treatment:**
- *Surgical excision with adequate margin from the surrounding normal salivary tissue, preserving the facial nerve in parotid lesions.*
- **Prognosis:**
- *25% of these benign lesions will undergo malignant transformation if left untreated for long time esp. after inadequate excision or previous radiotherapy..*

Monomorphic Adenomas

- *They are formed f one type of cell with absence of connective tissue changes .*
- *In cases where background stroma contains myxoid , chondroid or mesenchymal derivatives the term "monomorphic" adenoma should not apply , but rather "mixed tumour."*

Papillary Cystadenoma Lymphomatosum (Adenolymphoma or Warthin’s tumour)

- *These account for 7% of epith. neoplasms of the salivary glands.*
- *They are commonly occurring in parotid and are rare in the oral cavity .*
- *They arise in a L.N. as a result of entrapment of salivary gland elements early in development.*

Clinical Picture:

- *They commonly occur in the parotid gland . They usually occupy the tail of the gland and present as doughy soft or cystic masses . They are commoner in old males and could be seen bilaterally in 5% of cases and could be multiple in the same gland . Aspiration*
- → *creamy fluid .*

Treatment:

- *CT scan is essential to exclude multiplicity of the lesions and the bilateral presentation.*
- *Conservative surgical excision is effective.*

Malignant Salivary tumours

- *I Mucoepidermoid carcinoma*
- *II Adenoid Cystic carcinoma*
- *III Carcinoma ex-mixed tumour& malignant mixed tumour*

Mucoepidermoid Carcinoma

- *It could be low, intermediate or advanced according to its histological behavior , all grades can give metastases . However, the low grade variety is almost locally invasive and relatively non aggressive.*
- **Clinical Picture:**
- 60-90% of these tumours are encountered in the parotid gland. It is the commonest salivary malignancy. It is the commonest salivary malignancy in childhood . It is commoner in the 3rd to the 6th decades . Males are equal to females in incidence.
- **Clinical manifestations** , depend on the histology grade , the low grade take a long painless course like mixed salivary tumours.
- Intraorally , often resembles a retention cyst or a mucocele.
- High grade malignancies grow more rapidly and painfully and in the parotid may invade the facial nerve

Histopathology:

- *Formed of epidermoid and mucus-secreting cells, with tendency to formation of mucin containing cysts. The high grade variety may resemble a squamous cell carcinoma with early small numbers of mucus cells*

Treatment:

- *Low grade localized : local resection with safety margin*
- *+ follow up*
- *High grade extension: Local resection with safety margin*
- *+Radical N.D.*
- *+P.O. radiotherapy*

Prognosis:

- *95% , 5 yr survival in low grade malignancies.*
- *40%, 5yr survival in high grade malignancies*

II Adenoid Cystic Carcinoma

- *It is one of the most deceptive and frustrating of all the tumours in the head and neck.*
- **Clinical Picture**
- *It accounts for ¼ salivary malignancies . It occurs more commonly in the minor salivary glands.*
- *Common in the 5th to the 7th decades*
- *Males & females are equal*
- *Patient presents with a lump in the gland firm and slightly tender with a slow growth rate , Facial nerve involvement may be the first presentation . Bone infiltration may also be the 1st presentation.*
- *It gives metastases more to lung rather than the local L.N.s*
- *Very importantly is the perineural extension so it can metastasize in distant areas like the cranial cavity in palatal involvement.*

- **Histopathology:**
- *Cribriform , cylindromatous, tubular or solid or a combination of these forms*
- ***Bad Prognosis:***
- *Solid type , large size , metastases, facial nerve involvement , anatomic site and if there is central necrosis of the tumour.*
- *Of importance for histological diagnosis is the presence of perineural and intraneural invasion*

- **Treatment:**
- *Surgical excision + safety margin*
- *+or – RND in presence of neck nodes*
- *+ PO radiotherapy*

Carcinoma ex-mixed tumour & malignant mixed tumour

- *Carcinoma ex-mixed is an epithelial malignancy arising in a pre-existing mixed tr. Where such remnants may be identified ; only the malignant component gives metastases.*
- *Malignant mixed tr. :is malignant from the start.*
- **Clinical Picture:**
- *Untreated benign tr. Present for several years , or on top of a benign mixed tr. That has had multiple recurrences.*

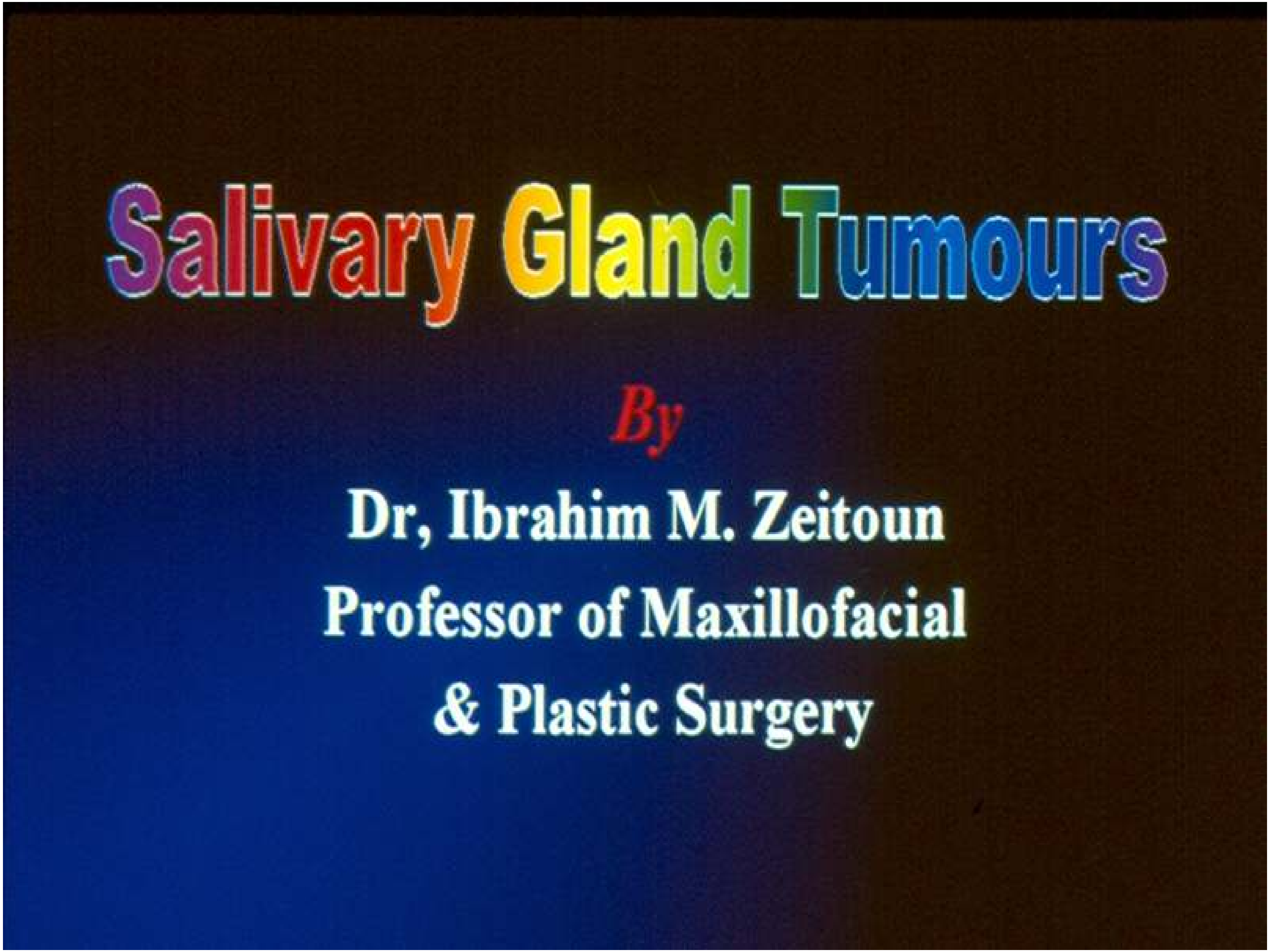
Suspicious malignant changes

- *1) Development of pain in a painless swelling of long duration.*
- *2)Rapid growth.*
- *3)Facial nerve involvement.*
- *4)Fixation to skin or underlying tissues.*
- *5)Ulceration*
- *6)L.N. or distant metastases.*

- **Histopathology:**
- *The margins are histopathologically well defined (both in Ca. ex-mixed & in mlig. mixed tr.), with minimal signs of infiltration. Areas of necrosis & hemorrhage with dystrophic mineralization are frequent.*
- *The metastases resemble the primary lesion.*
- **Treatment:**
- *Wide excision + or – RND (if LNs are evident)*

Thank you for your attention

ZEITOUN



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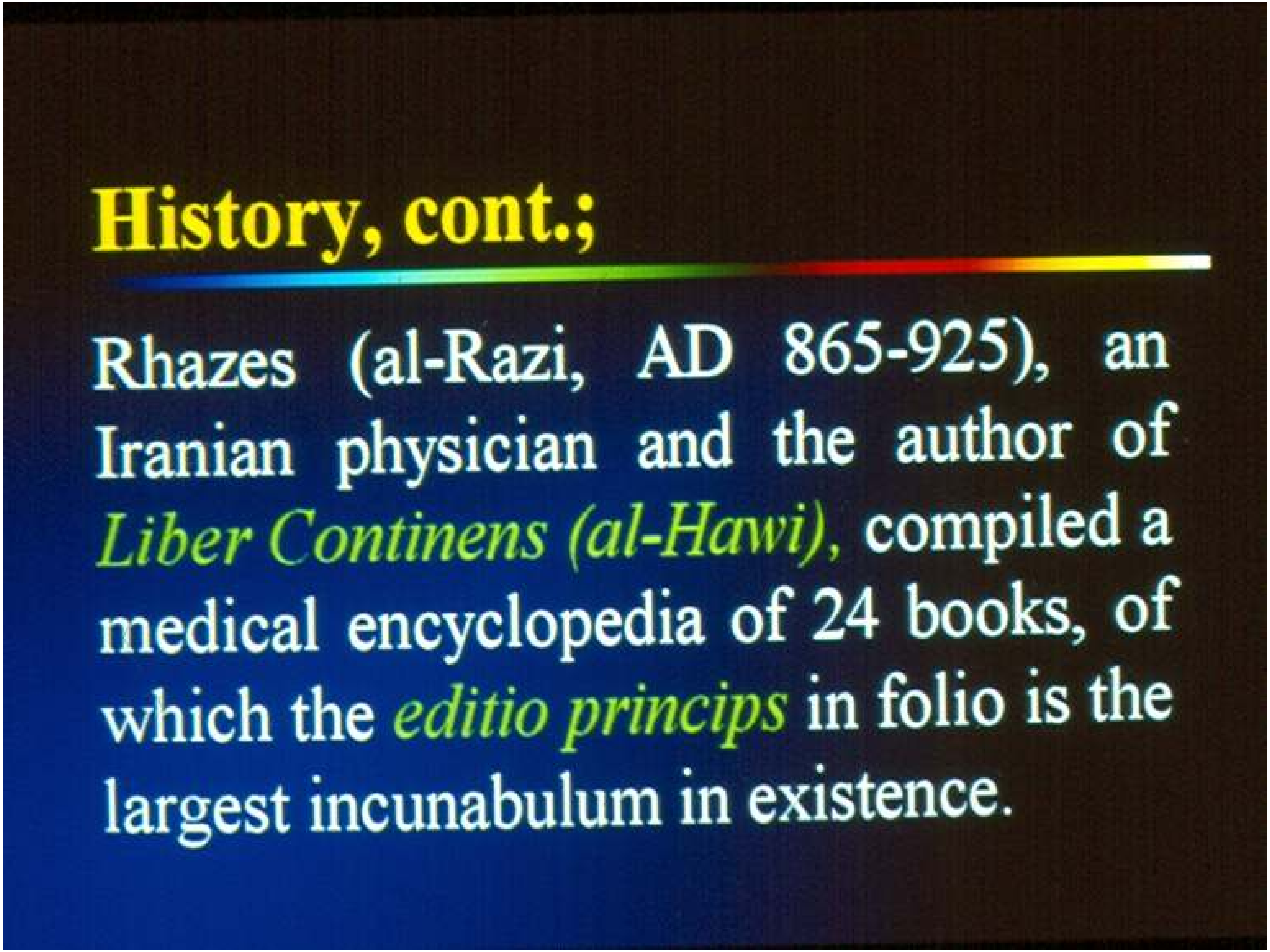
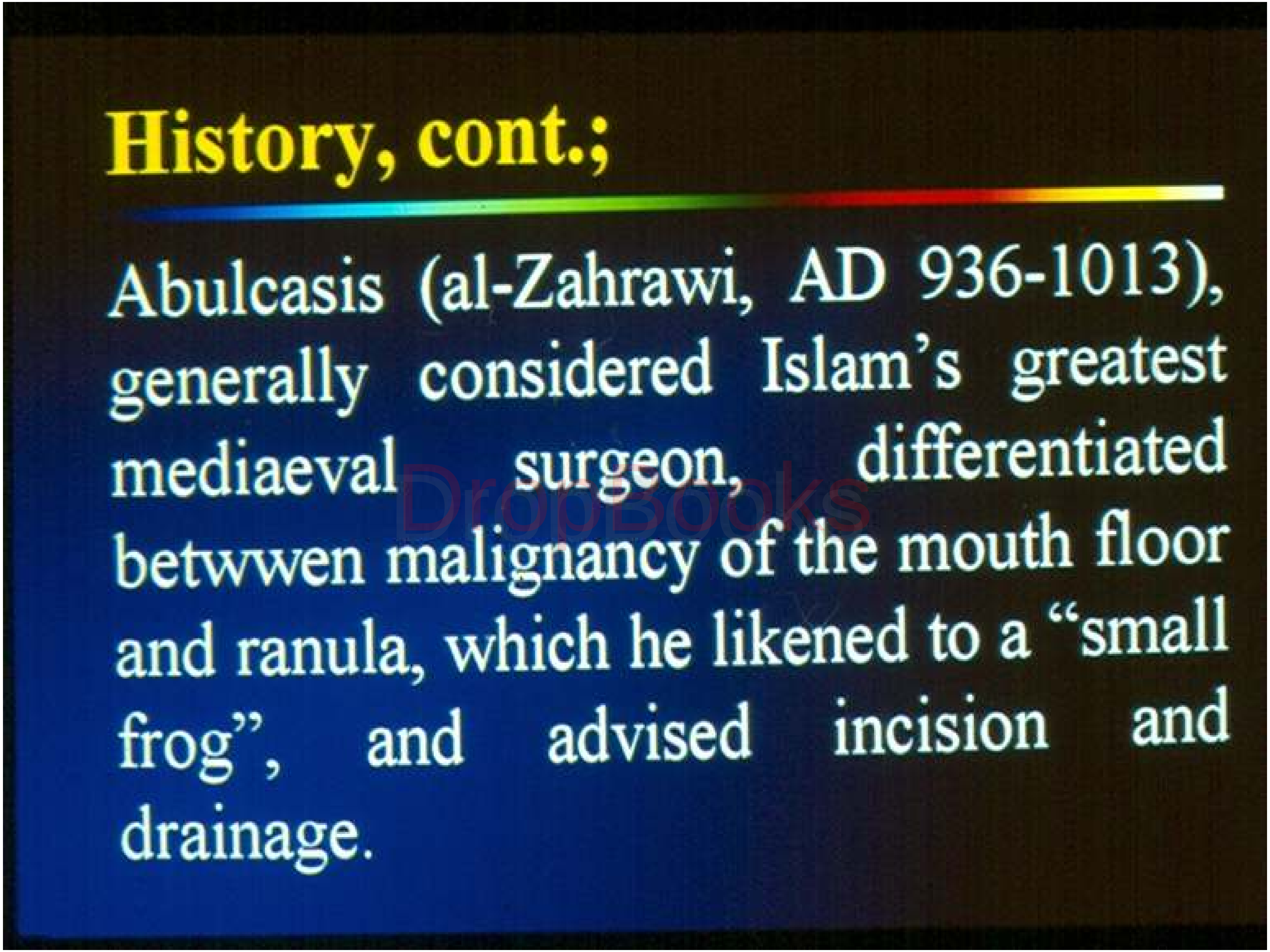
History

Diseases of the salivary glands, and particularly the parotid, were recognized by Hippocrates (460 - 370BC).



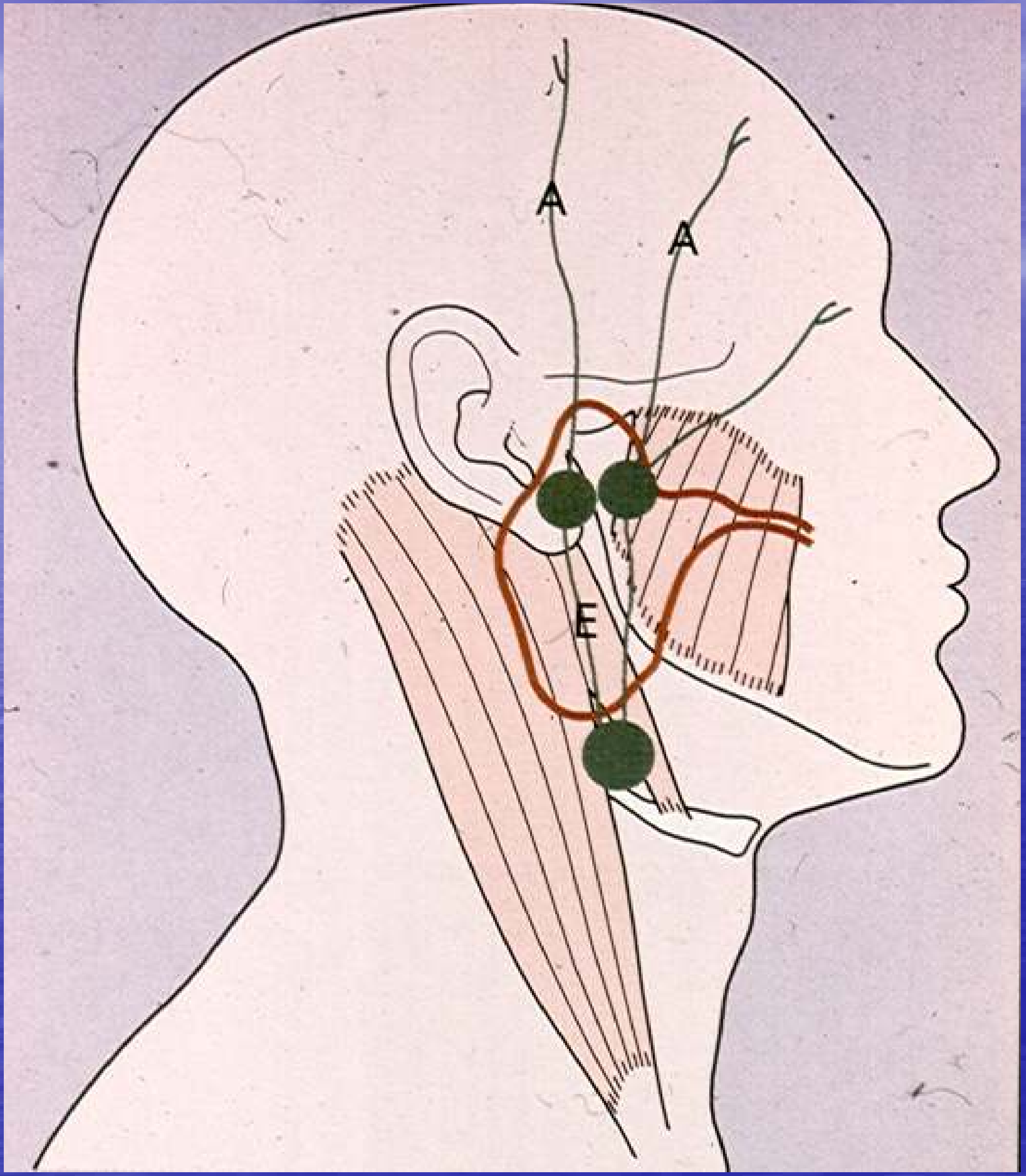
History, cont.;

Rhazes (al-Razi, AD 865-925), an Iranian physician and the author of *Liber Continens (al-Hawi),* compiled a medical encyclopedia of 24 books, of which the *editio princips* in folio is the largest incunabulum in existence.



History, cont.;

Abulcasis (al-Zahrawi, AD 936-1013), generally considered Islam's greatest mediaeval surgeon, differentiated betwwen malignancy of the mouth floor and ranula, which he likened to a "small frog", and advised incision and drainage.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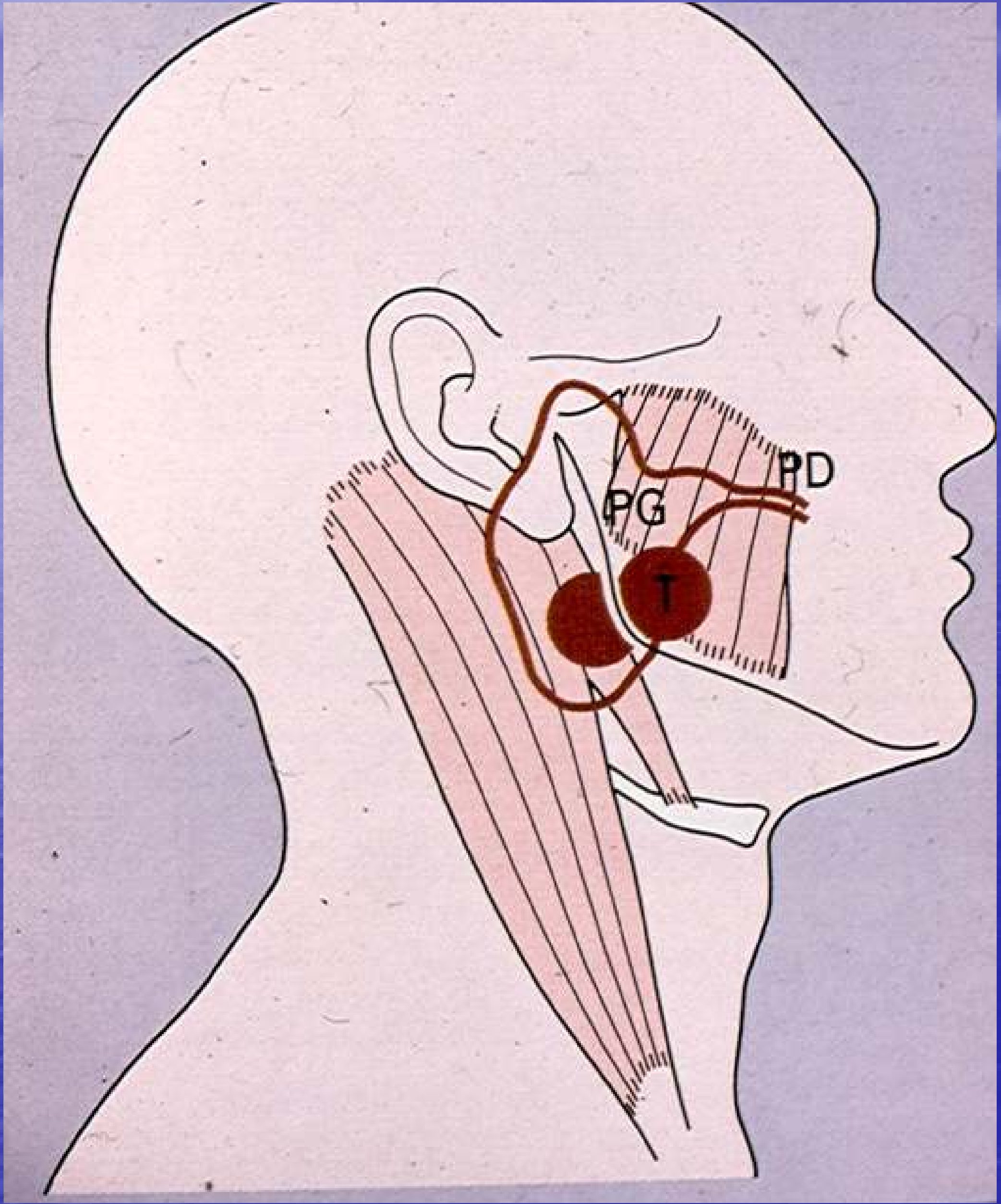
History, cont.;

Avicenna (ibn-Sina, AD 980-1037) of Bukhara wrote his *canon of medicine* in Arabic, adding personal observations to those of Hippocrates.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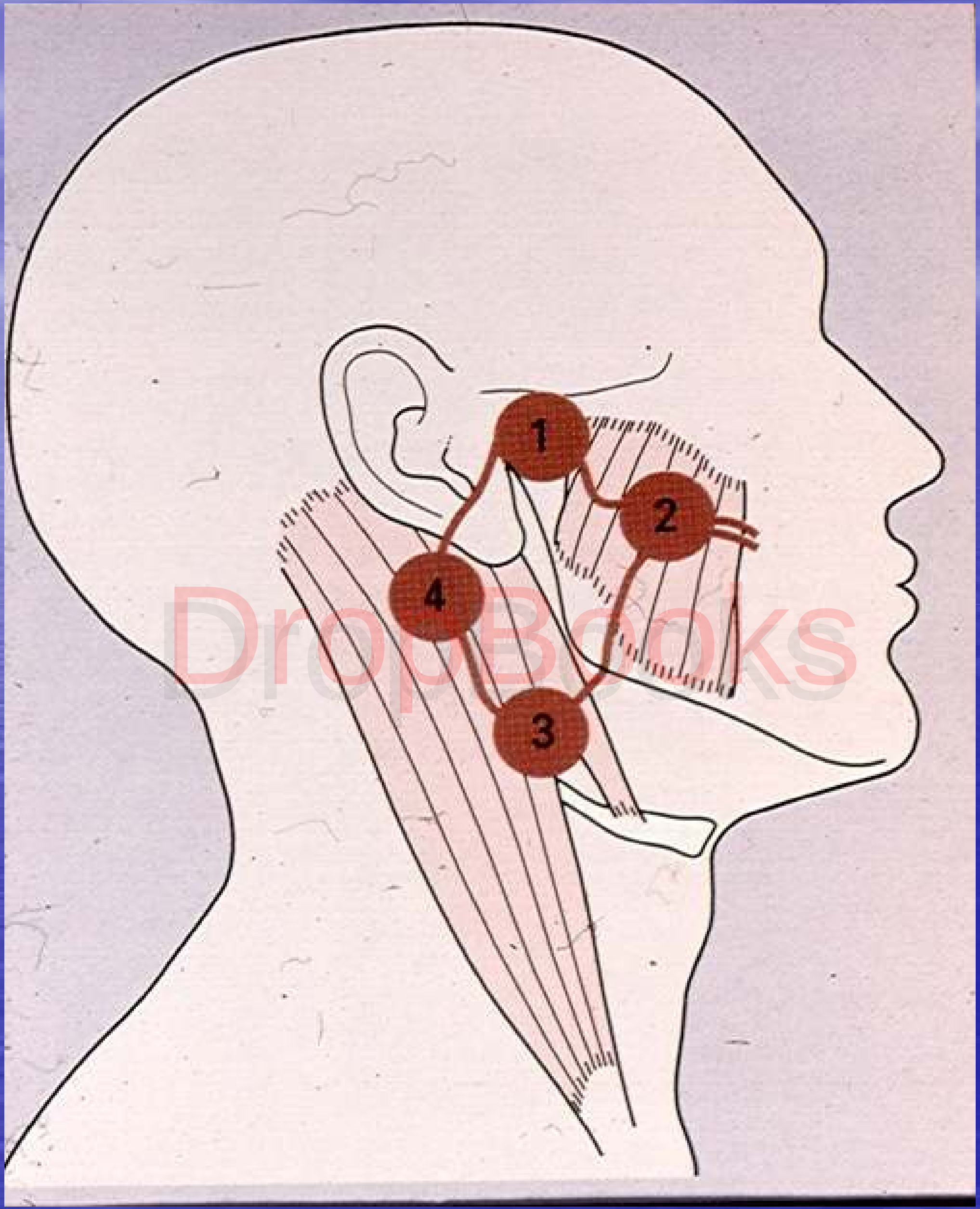
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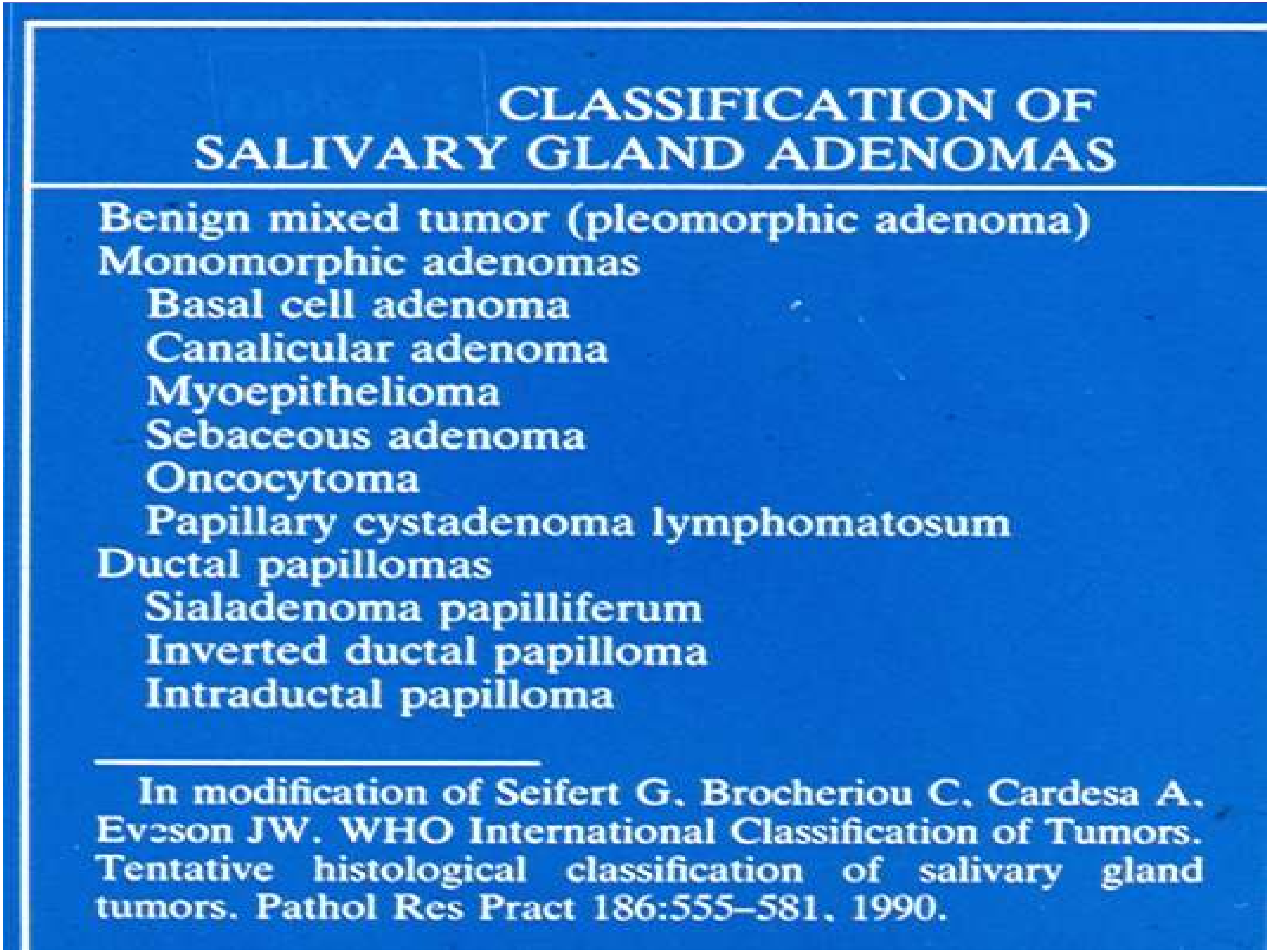
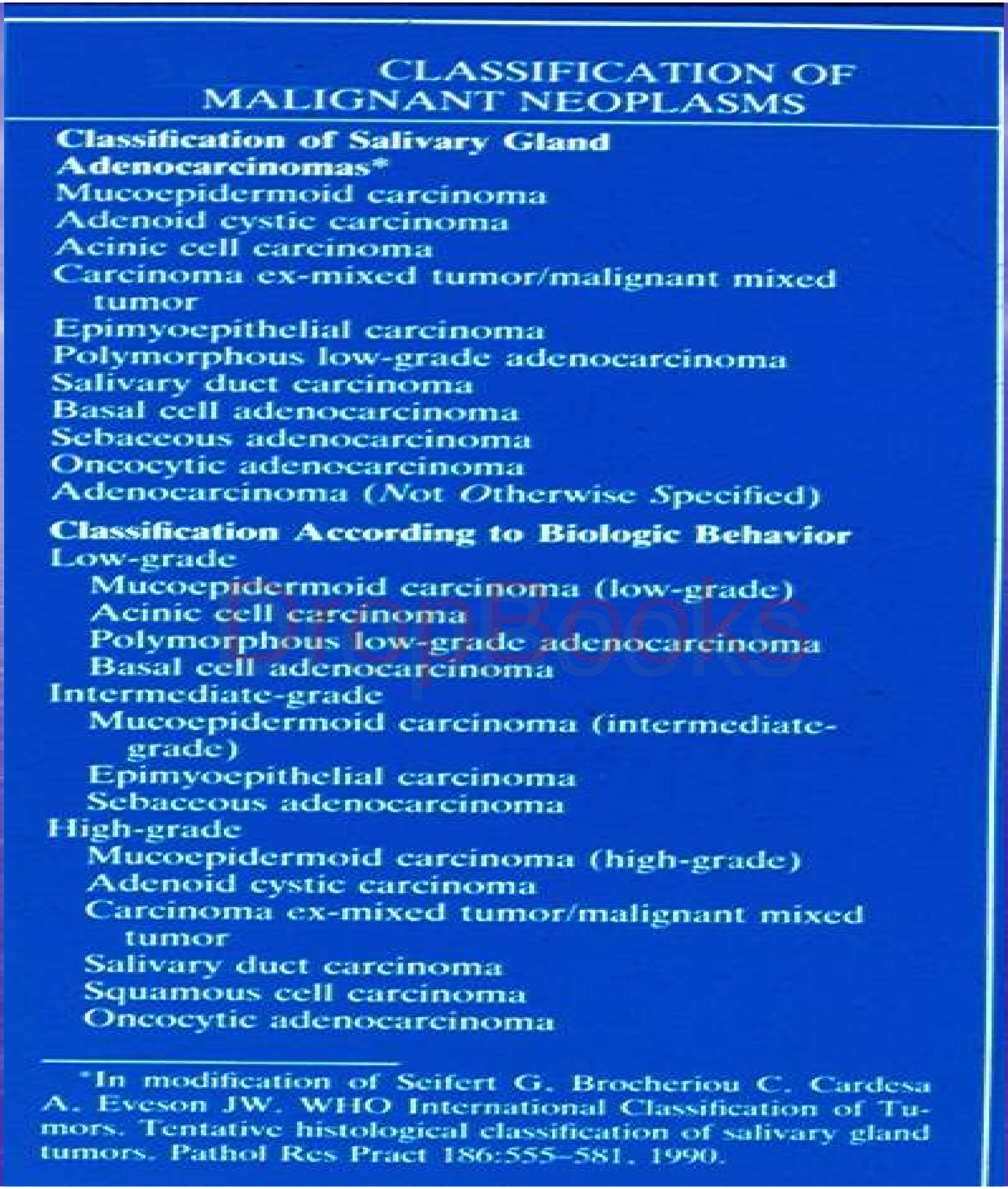


CLASSIFICATION OF SALIVARY GLAND ADENOMAS

- Benign mixed tumor (pleomorphic adenoma)
- Monomorphic adenomas
  - Basal cell adenoma
  - Canalicular adenoma
  - Myoepithelioma
  - Sebaceous adenoma
  - Oncocytoma
  - Papillary cystadenoma lymphomatosum
- Ductal papillomas
  - Sialadenoma papilliferum
  - Inverted ductal papilloma
  - Intraductal papilloma

In modification of Seifert G, Brocheriou C, Cardesa A, Eveson JW. WHO International Classification of Tumors. Tentative histological classification of salivary gland tumors. Pathol Res Pract 186:555–581, 1990.



CLASSIFICATION OF MALIGNANT NEOPLASMS

Classification of Salivary Gland Adenocarcinomas*

- Mucoepidermoid carcinoma
- Adenoid cystic carcinoma
- Acinic cell carcinoma
- Carcinoma ex-mixed tumor/malignant mixed tumor
- Epimyoepithelial carcinoma
- Polymorphous low-grade adenocarcinoma
- Salivary duct carcinoma
- Basal cell adenocarcinoma
- Sebaceous adenocarcinoma
- Oncocytic adenocarcinoma
- Adenocarcinoma (*N*ot *O*therwise *S*pecified)

Classification According to Biologic Behavior

- Low-grade
  - Mucoepidermoid carcinoma (low-grade)
  - Acinic cell carcinoma
  - Polymorphous low-grade adenocarcinoma
  - Basal cell adenocarcinoma
- Intermediate-grade
  - Mucoepidermoid carcinoma (intermediate-grade)
  - Epimyoepithelial carcinoma
  - Sebaceous adenocarcinoma
- High-grade
  - Mucoepidermoid carcinoma (high-grade)
  - Adenoid cystic carcinoma
  - Carcinoma ex-mixed tumor/malignant mixed tumor
  - Salivary duct carcinoma
  - Squamous cell carcinoma
  - Oncocytic adenocarcinoma

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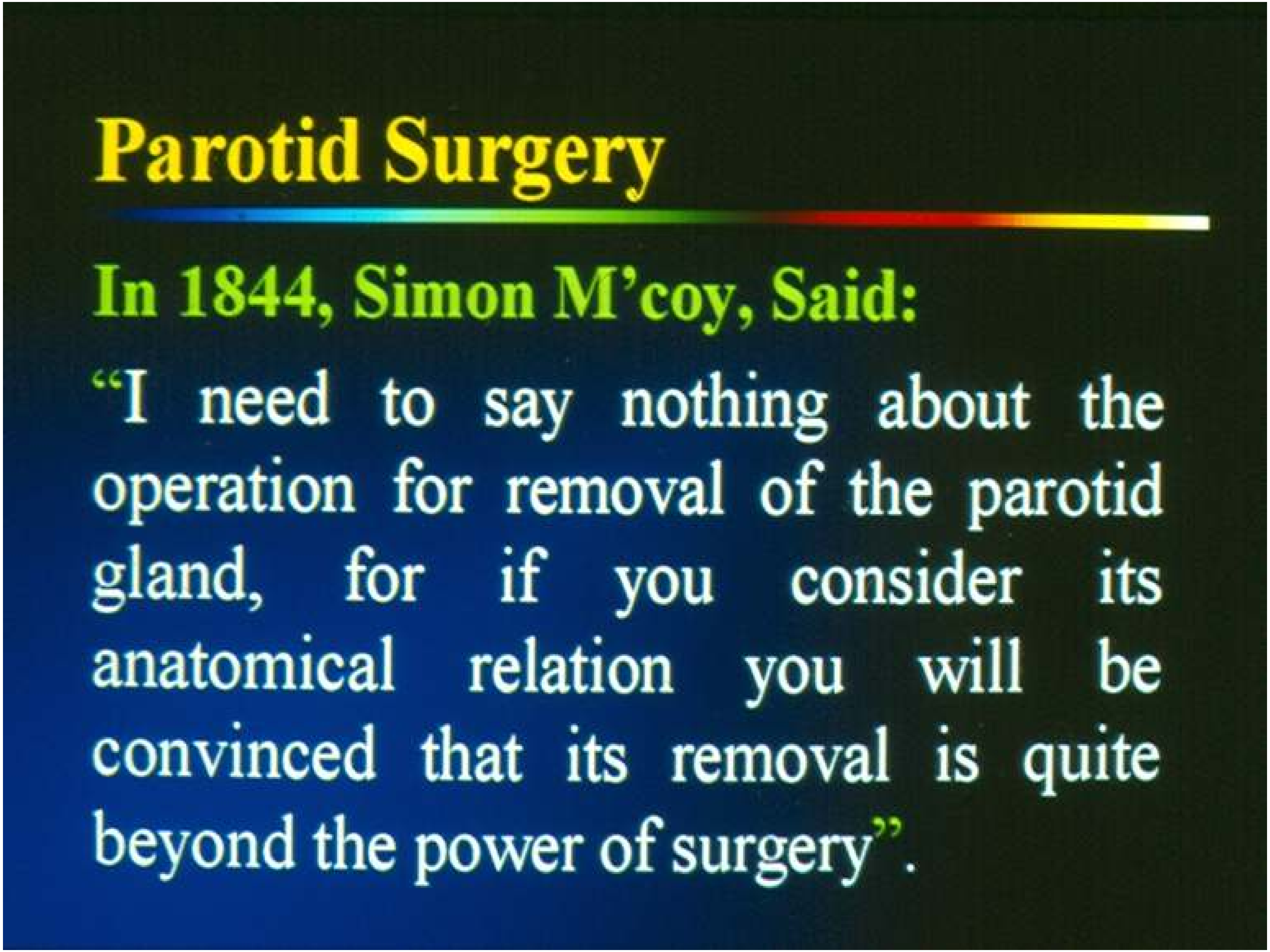
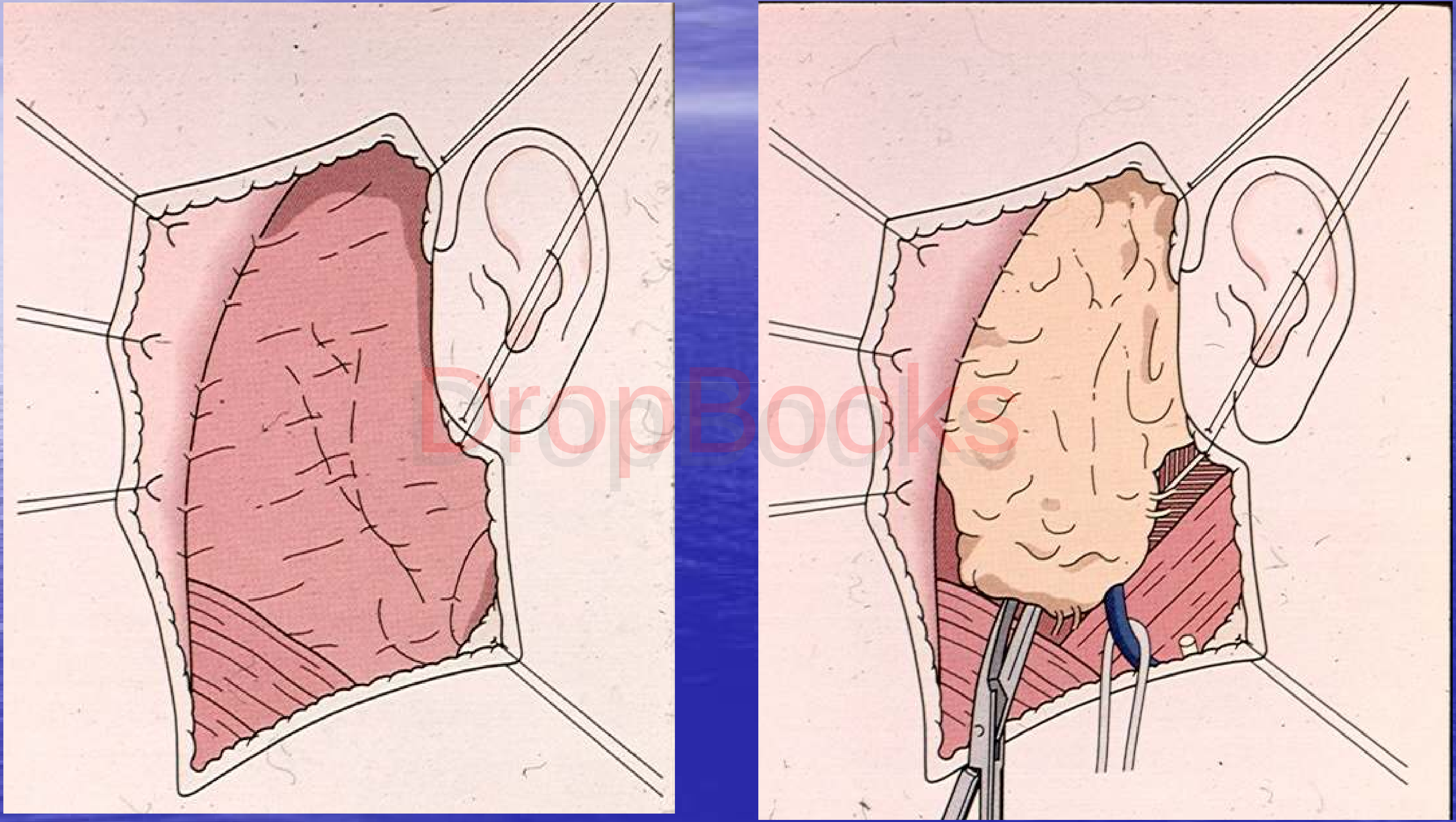
*In modification of Seifert G. Brocheriou C. Cardesa A. Eveson JW. WHO International Classification of Tumors. Tentative histological classification of salivary gland tumors. Pathol Res Pract 186:555–581, 1990.

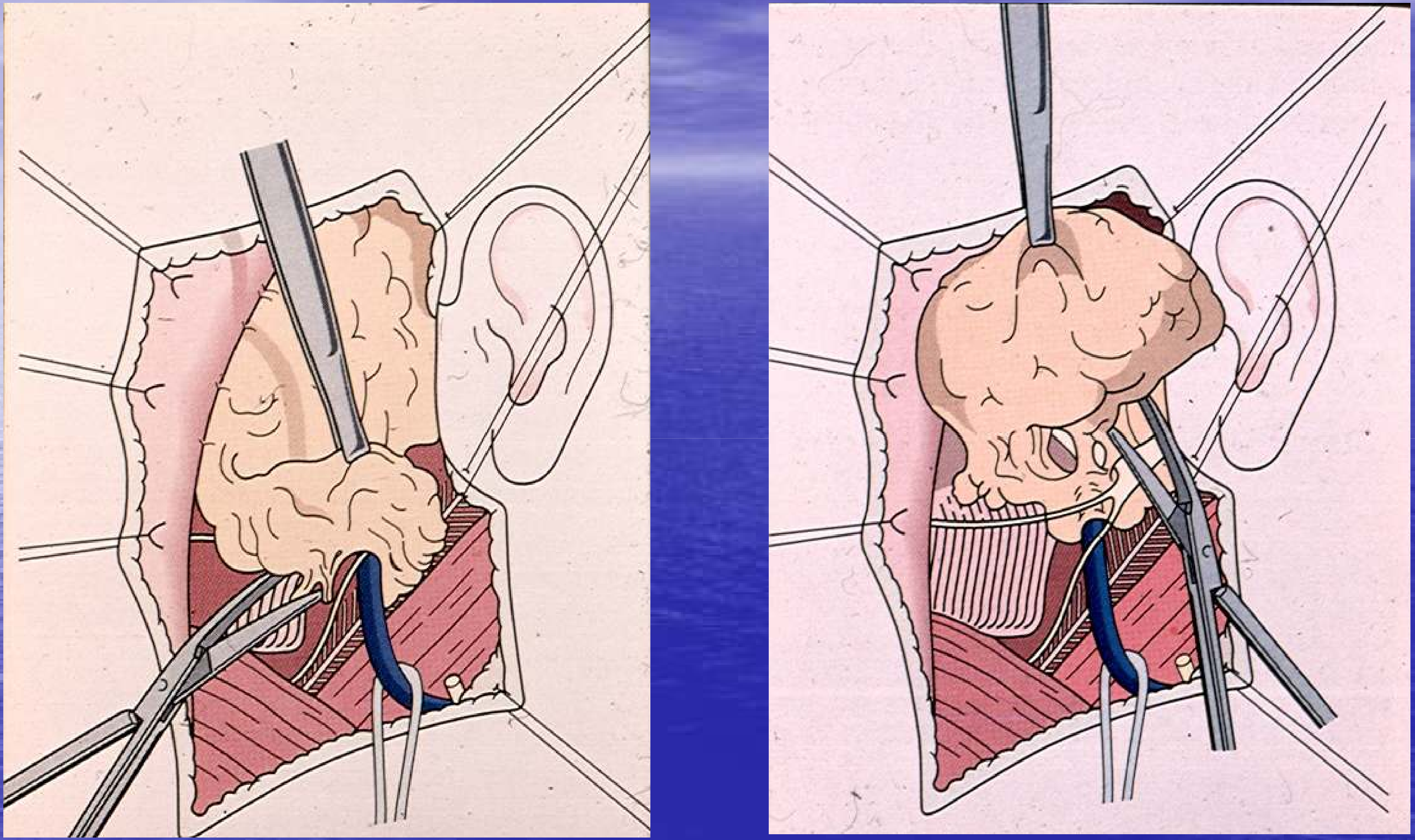


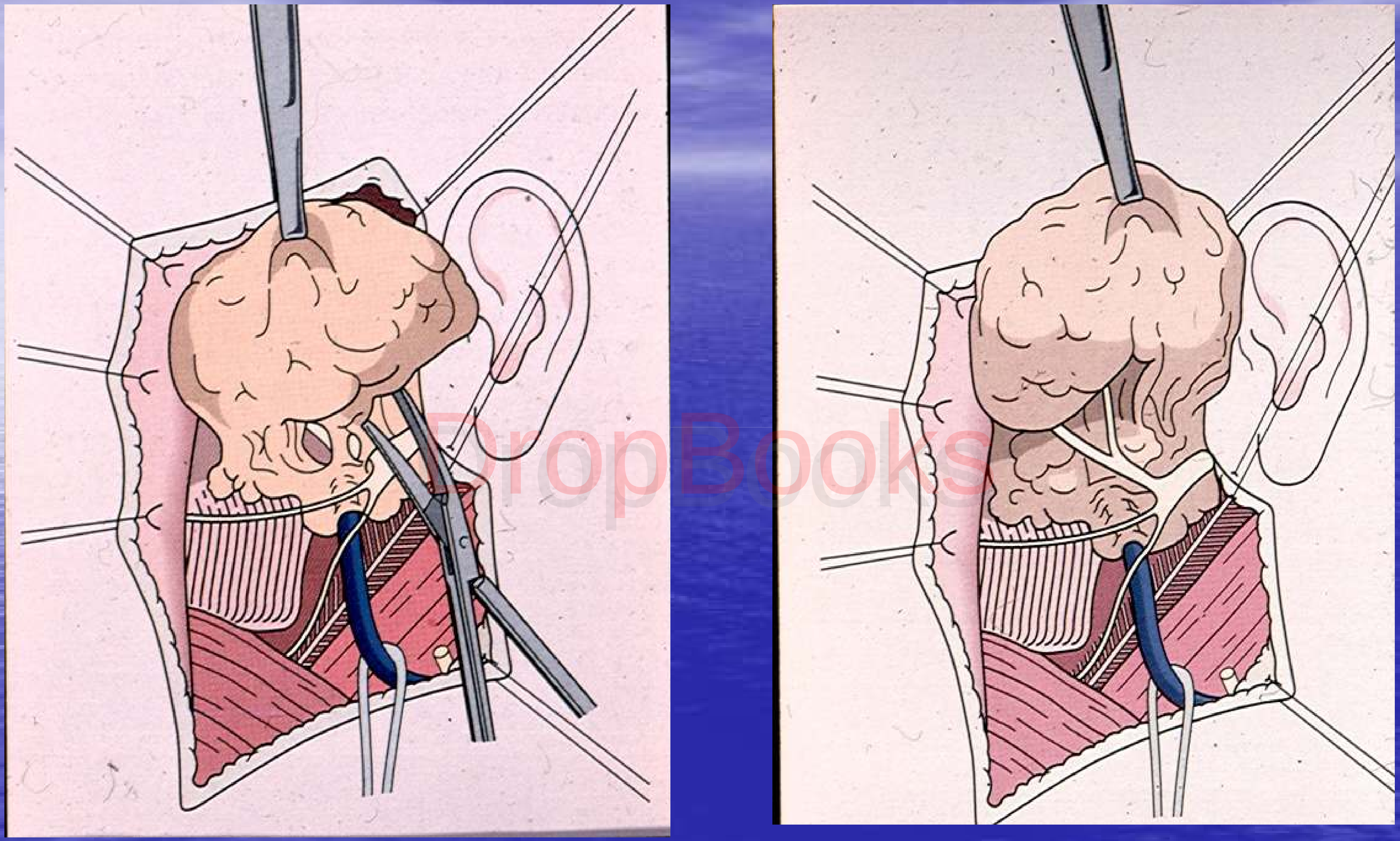
Parotid Surgery

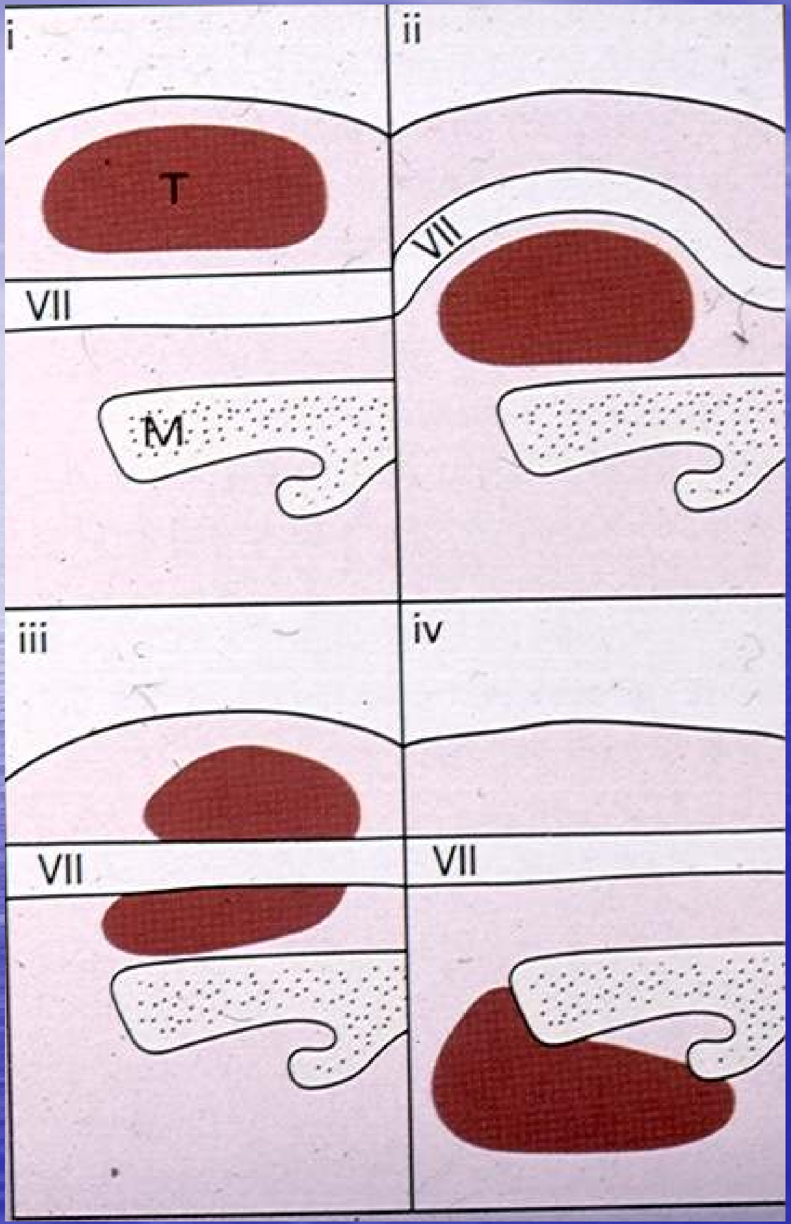
In 1844, Simon M'coy, Said:

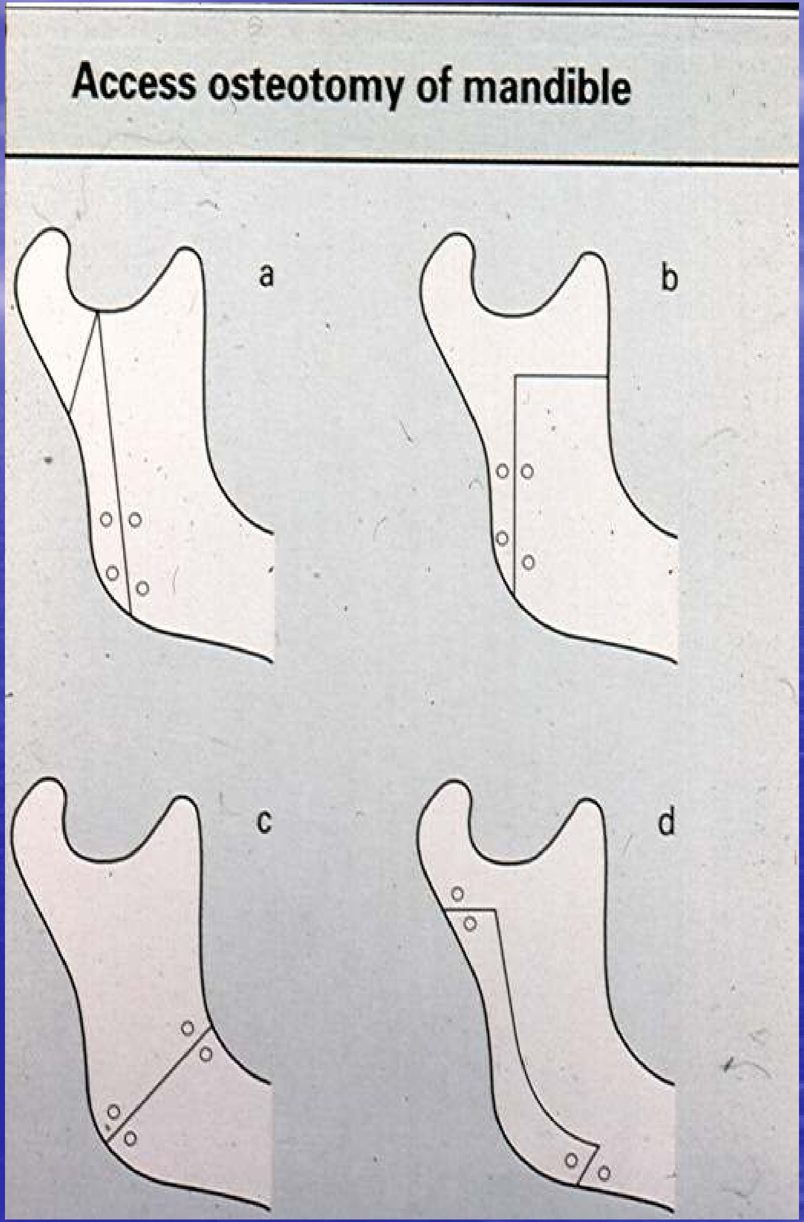
"I need to say nothing about the operation for removal of the parotid gland, for if you consider its anatomical relation you will be convinced that its removal is quite beyond the power of surgery".







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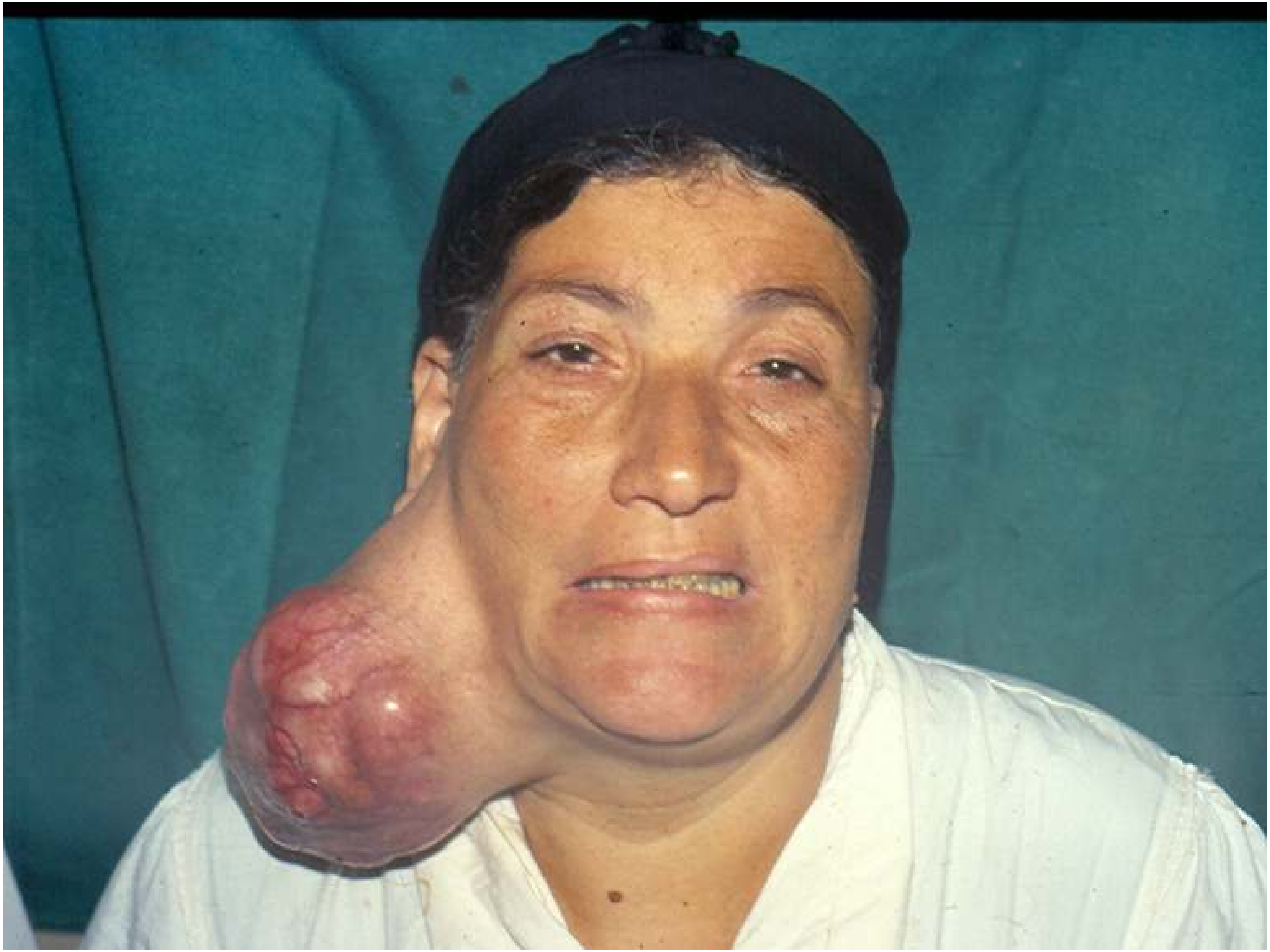

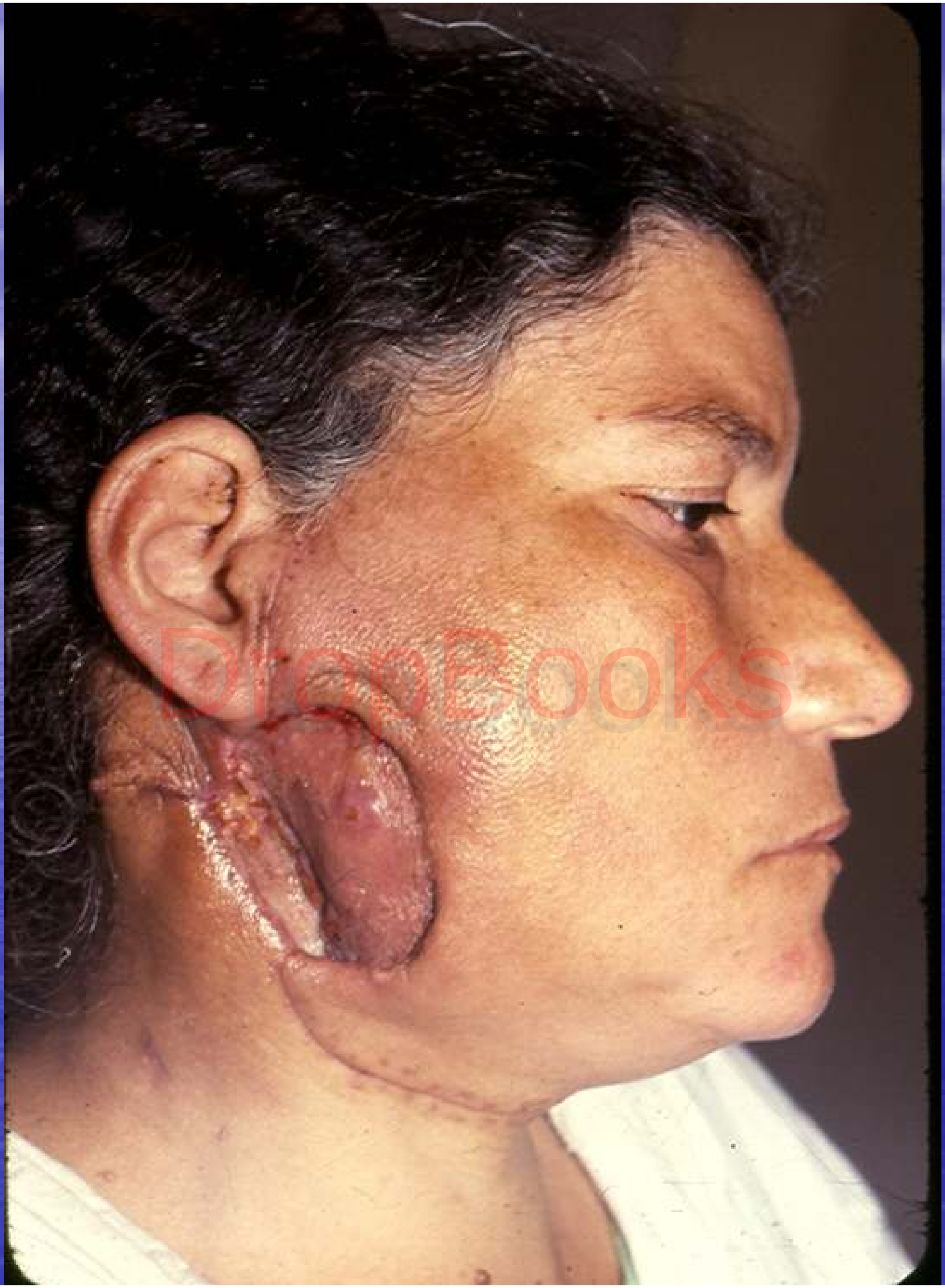

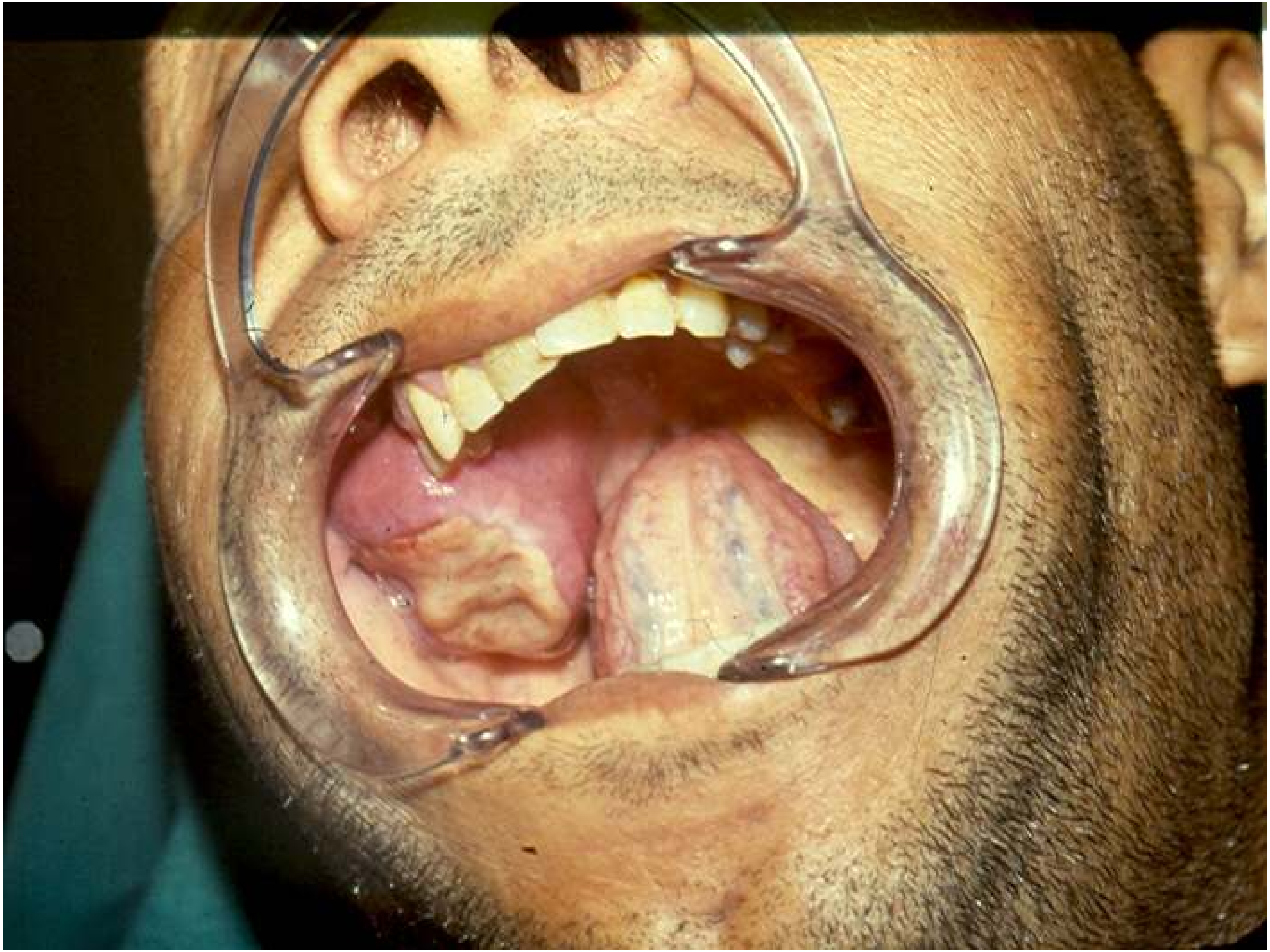

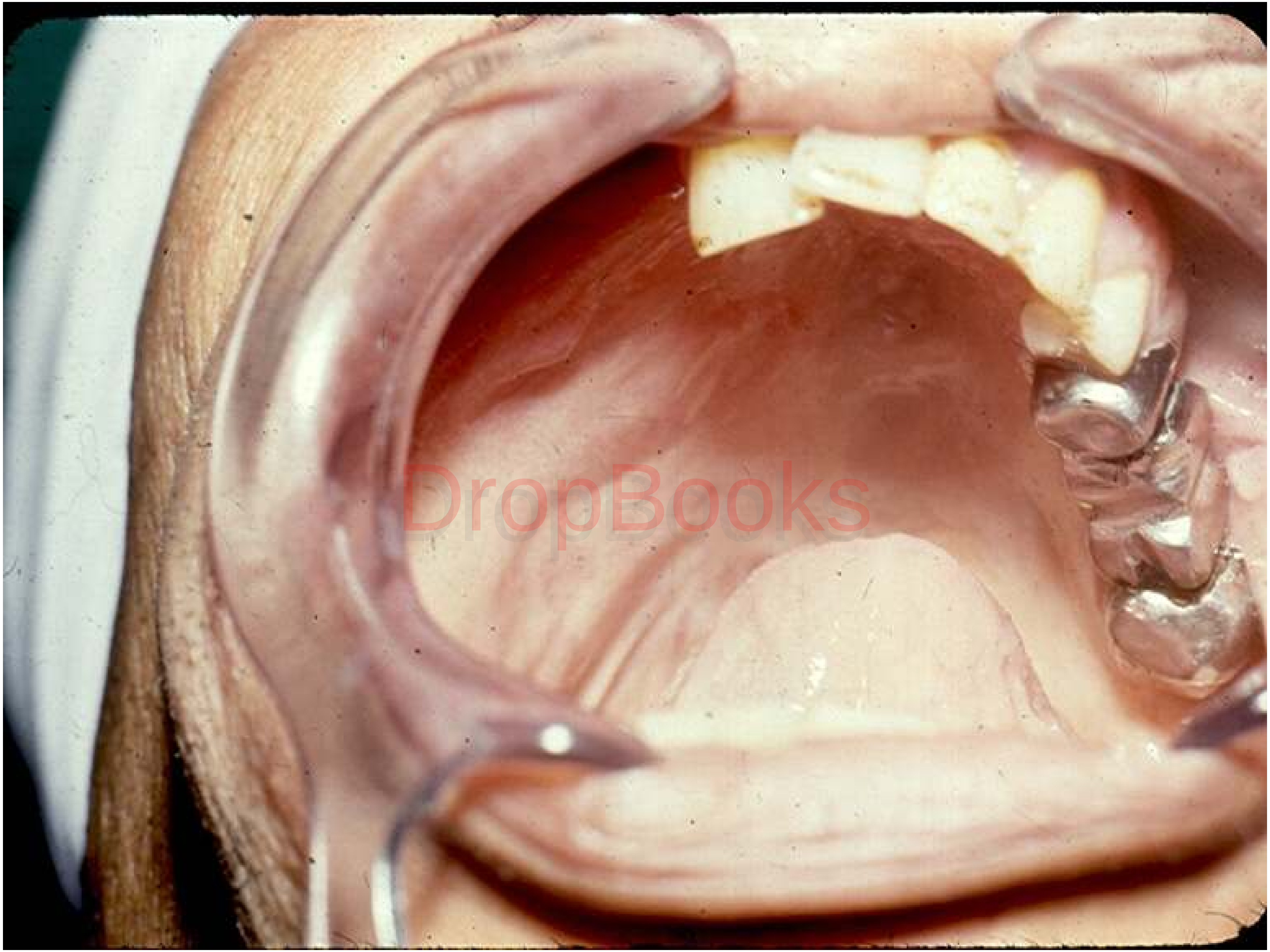

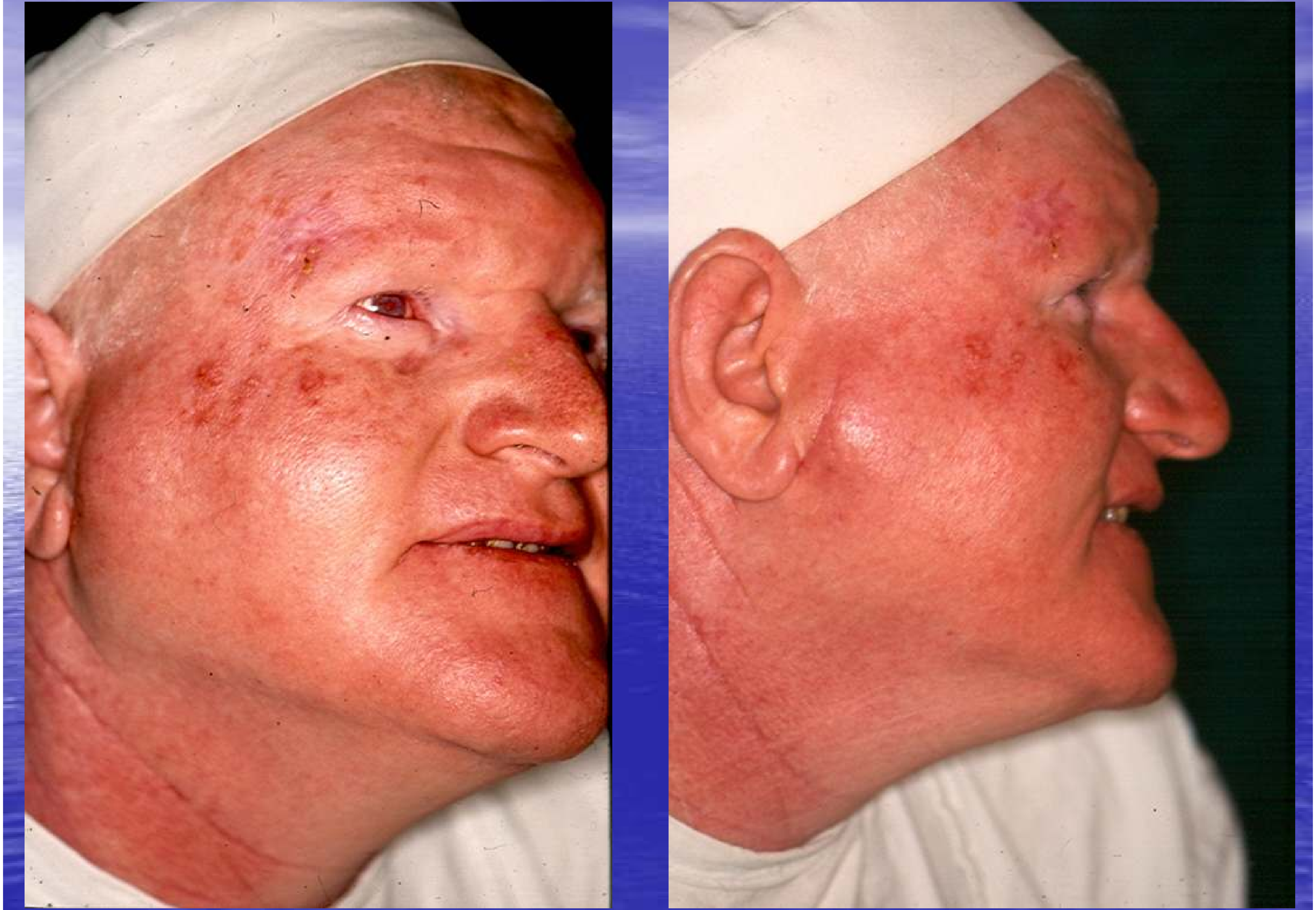

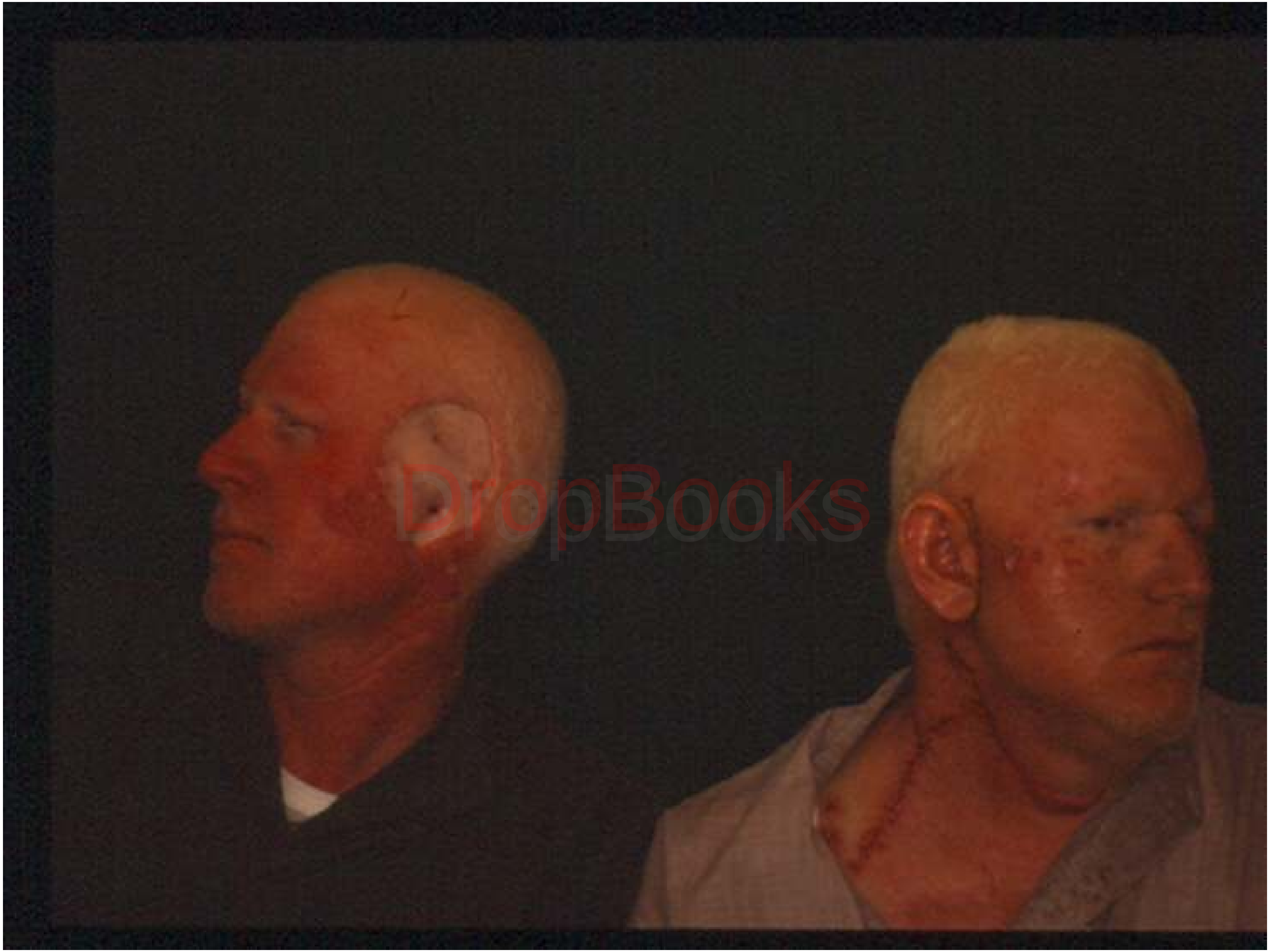

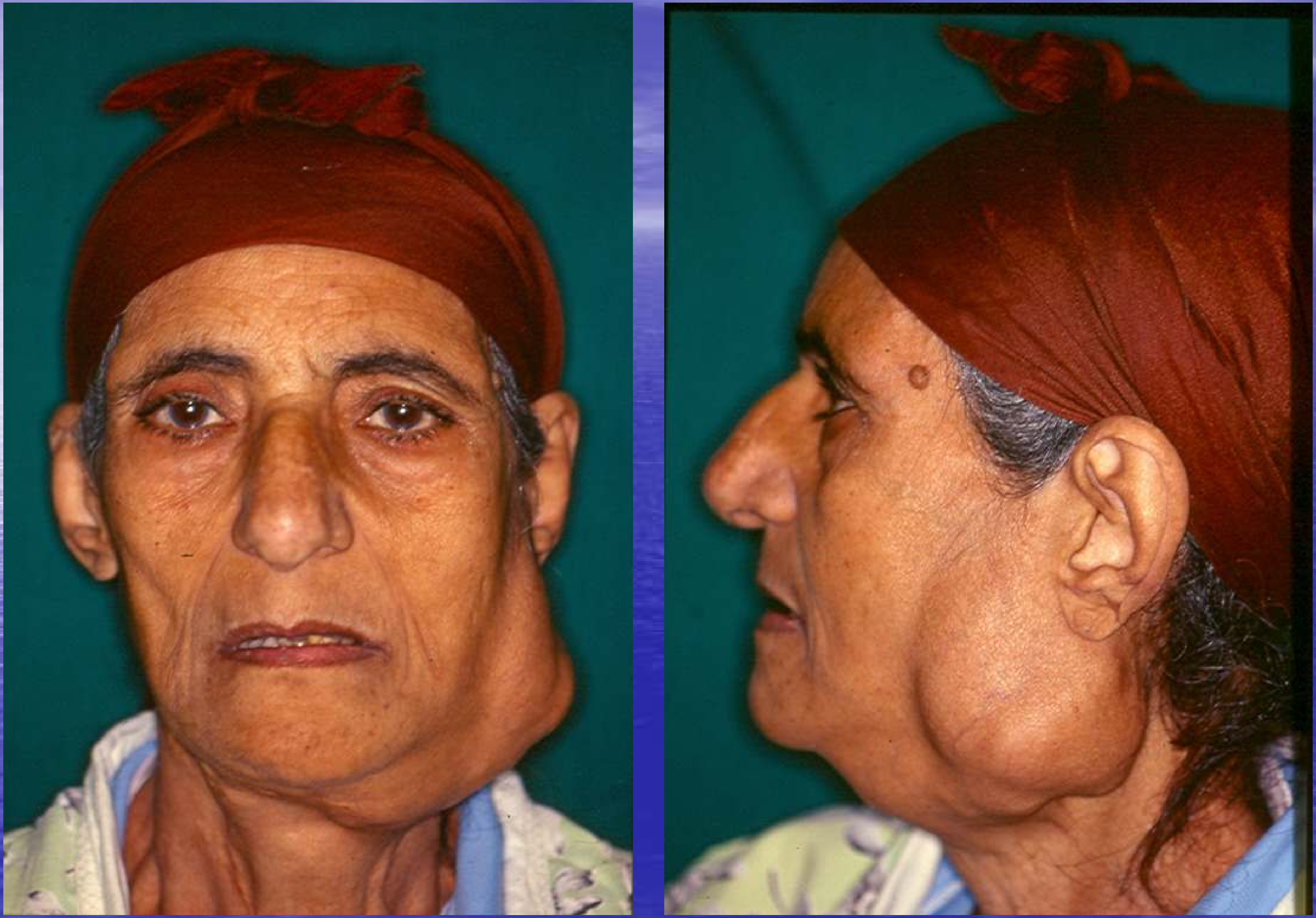

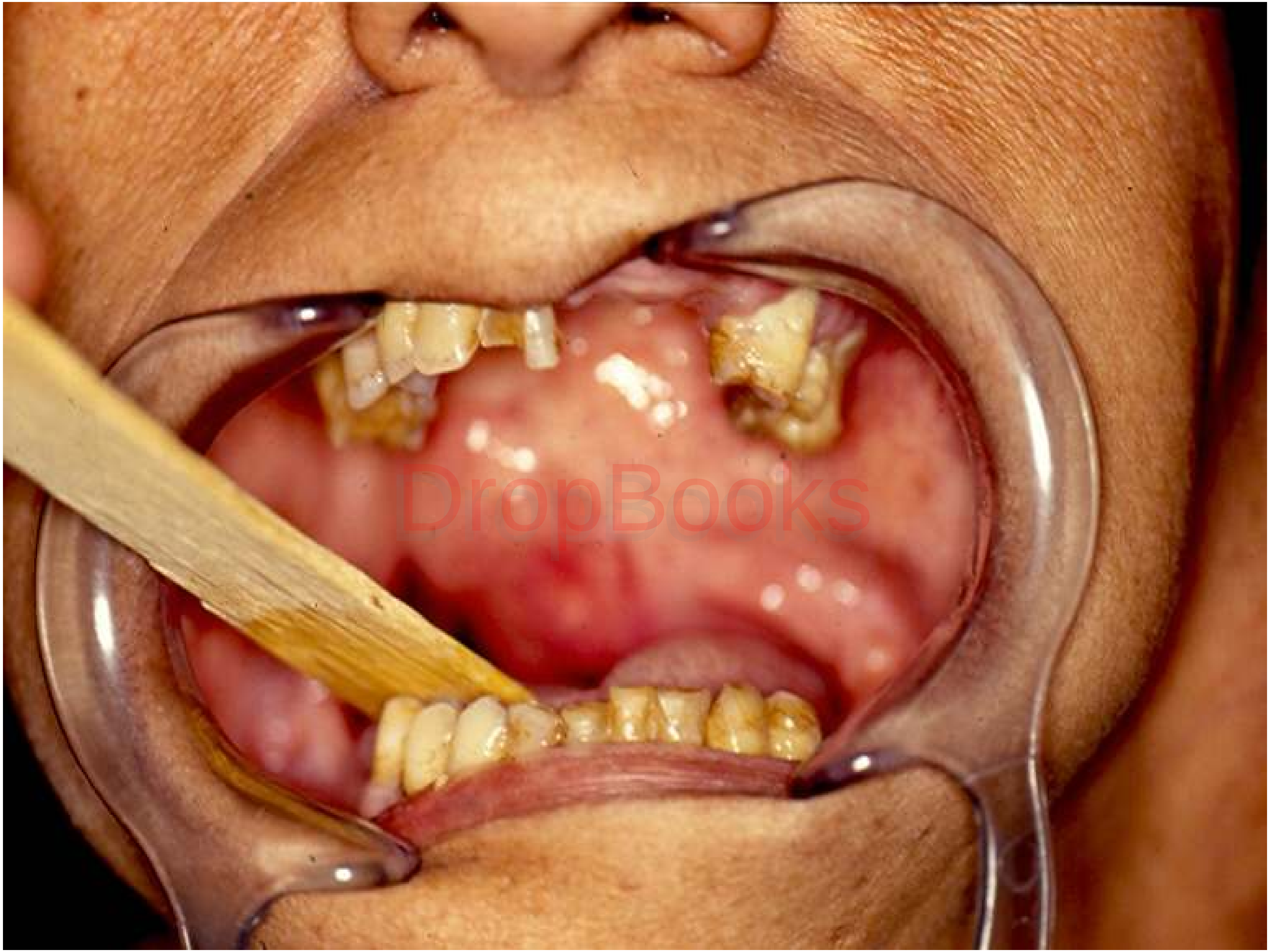

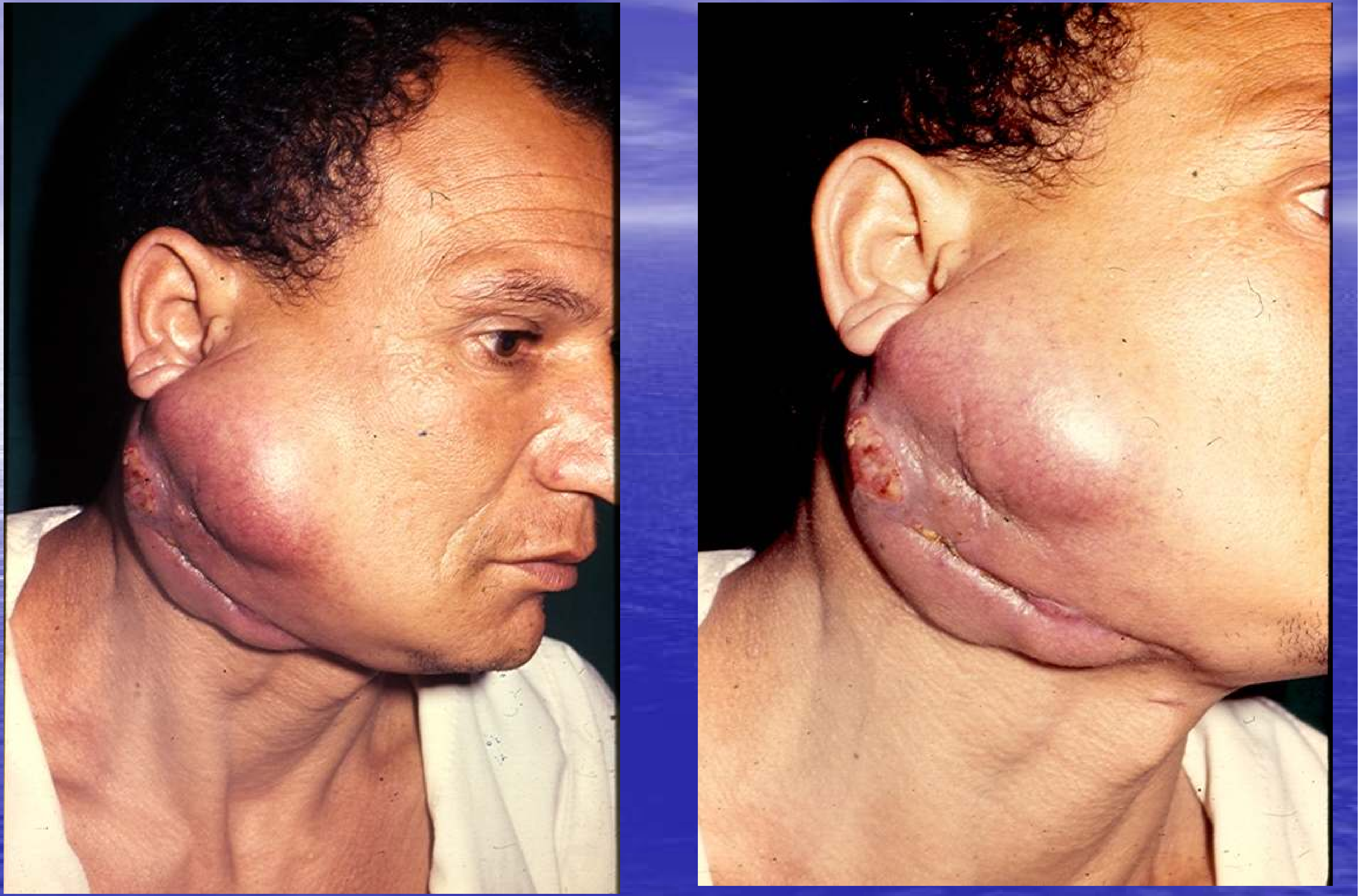

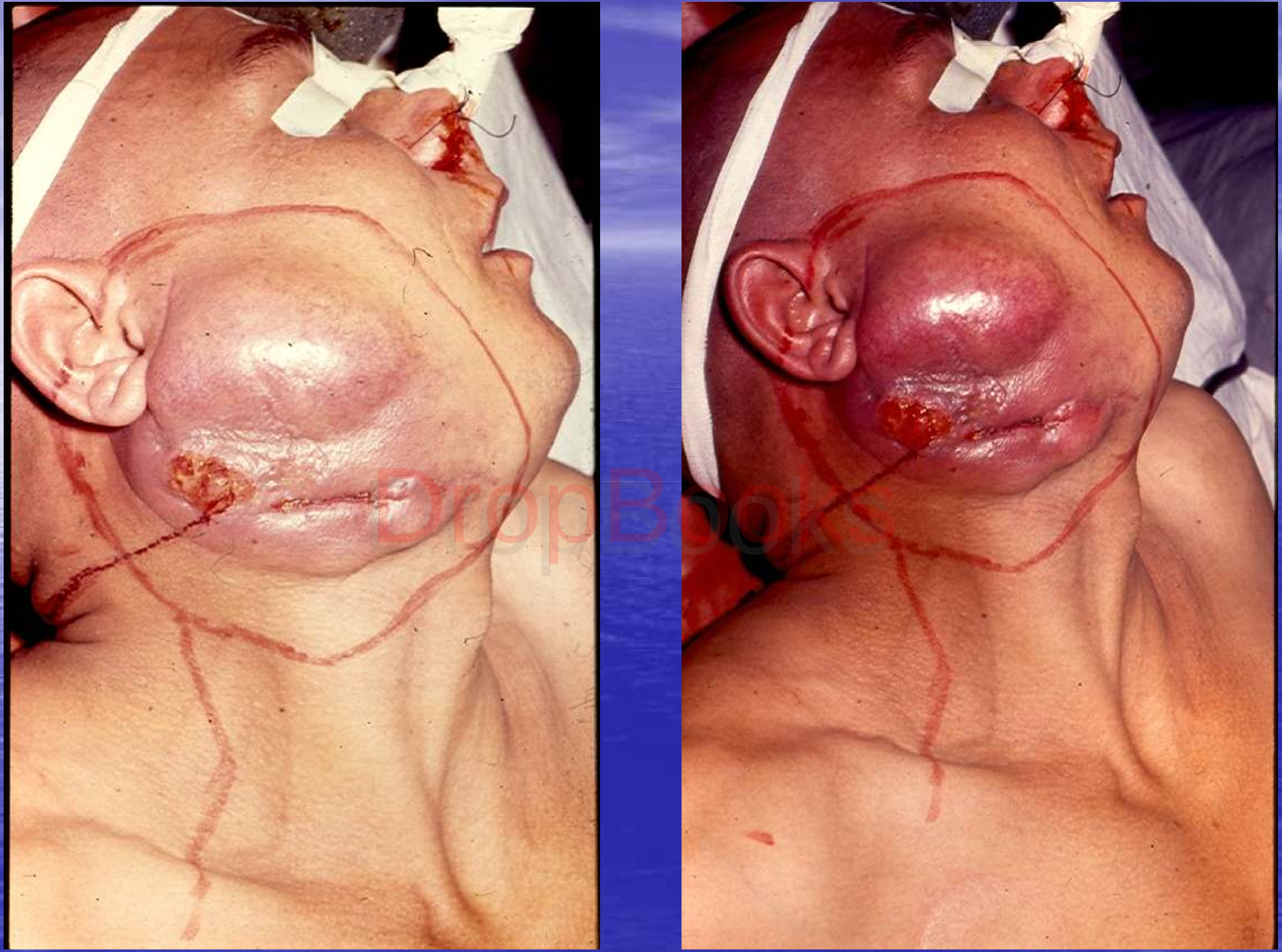

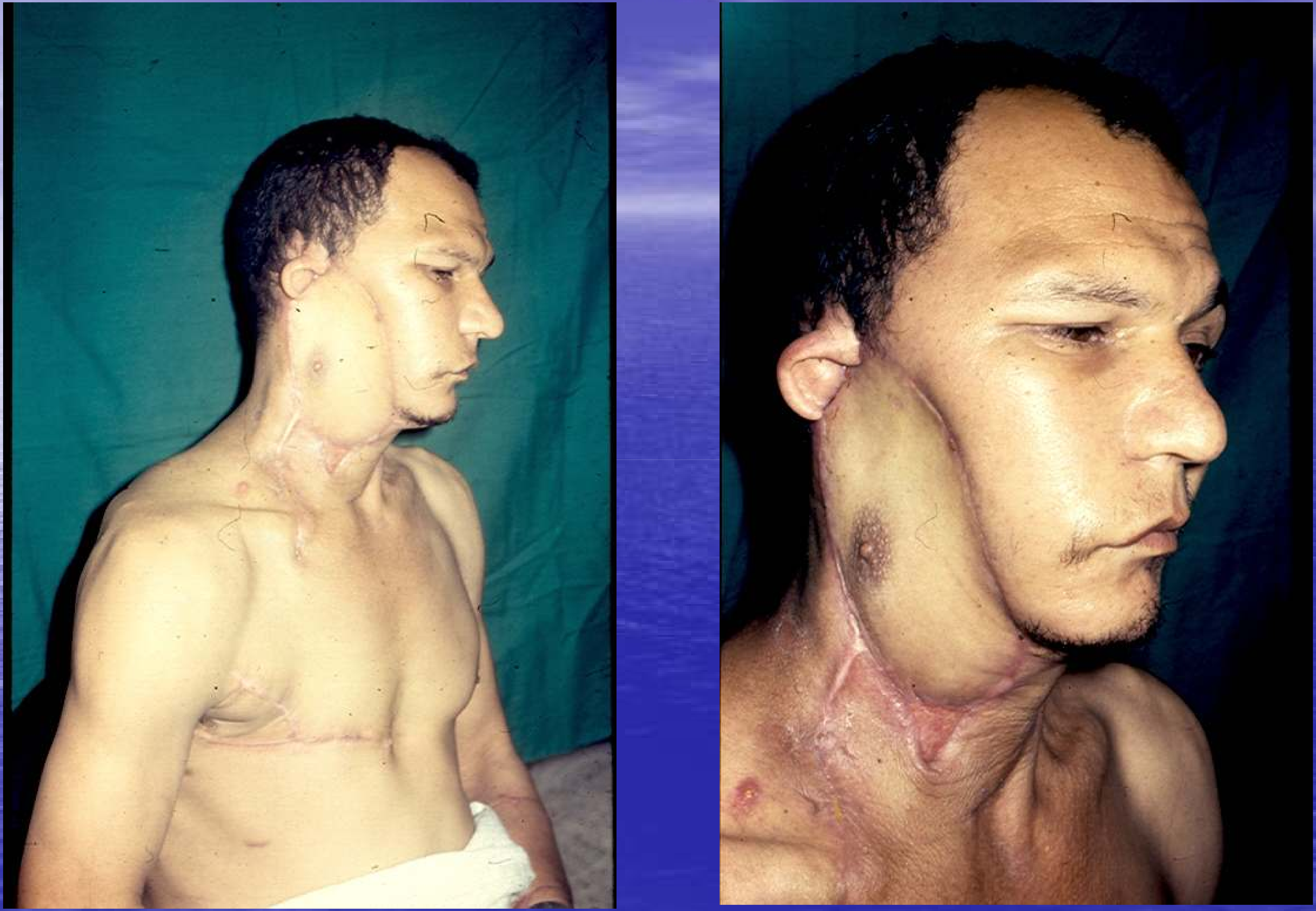

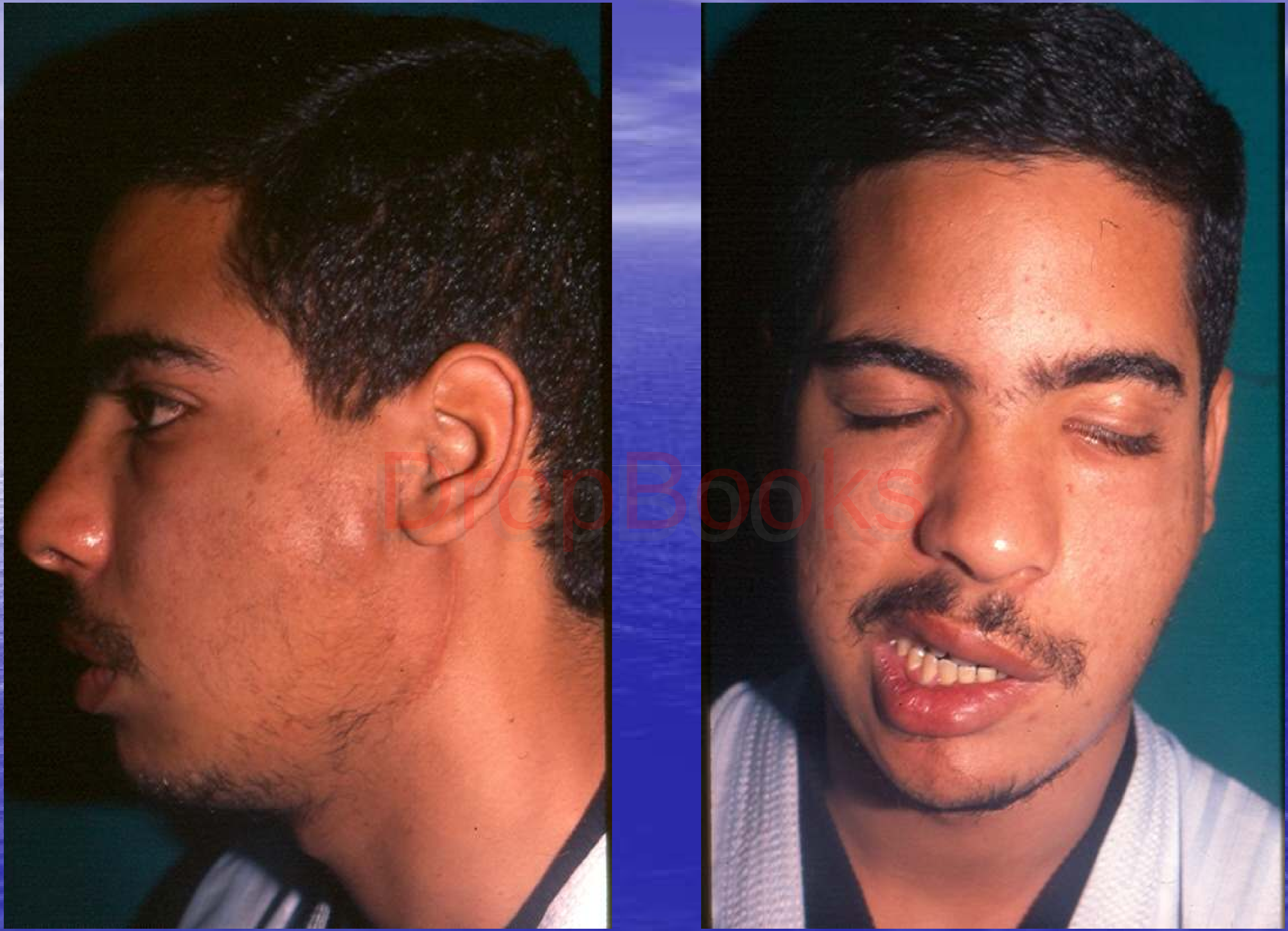

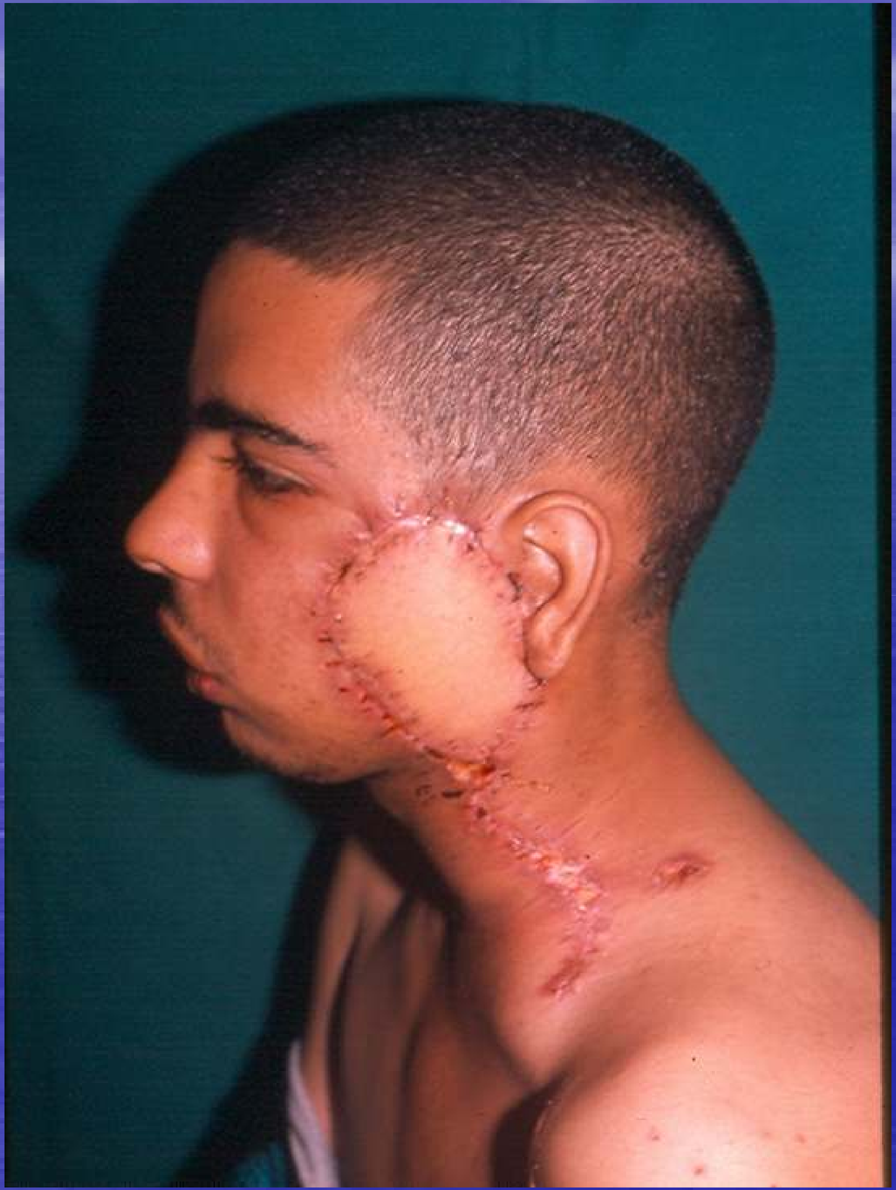

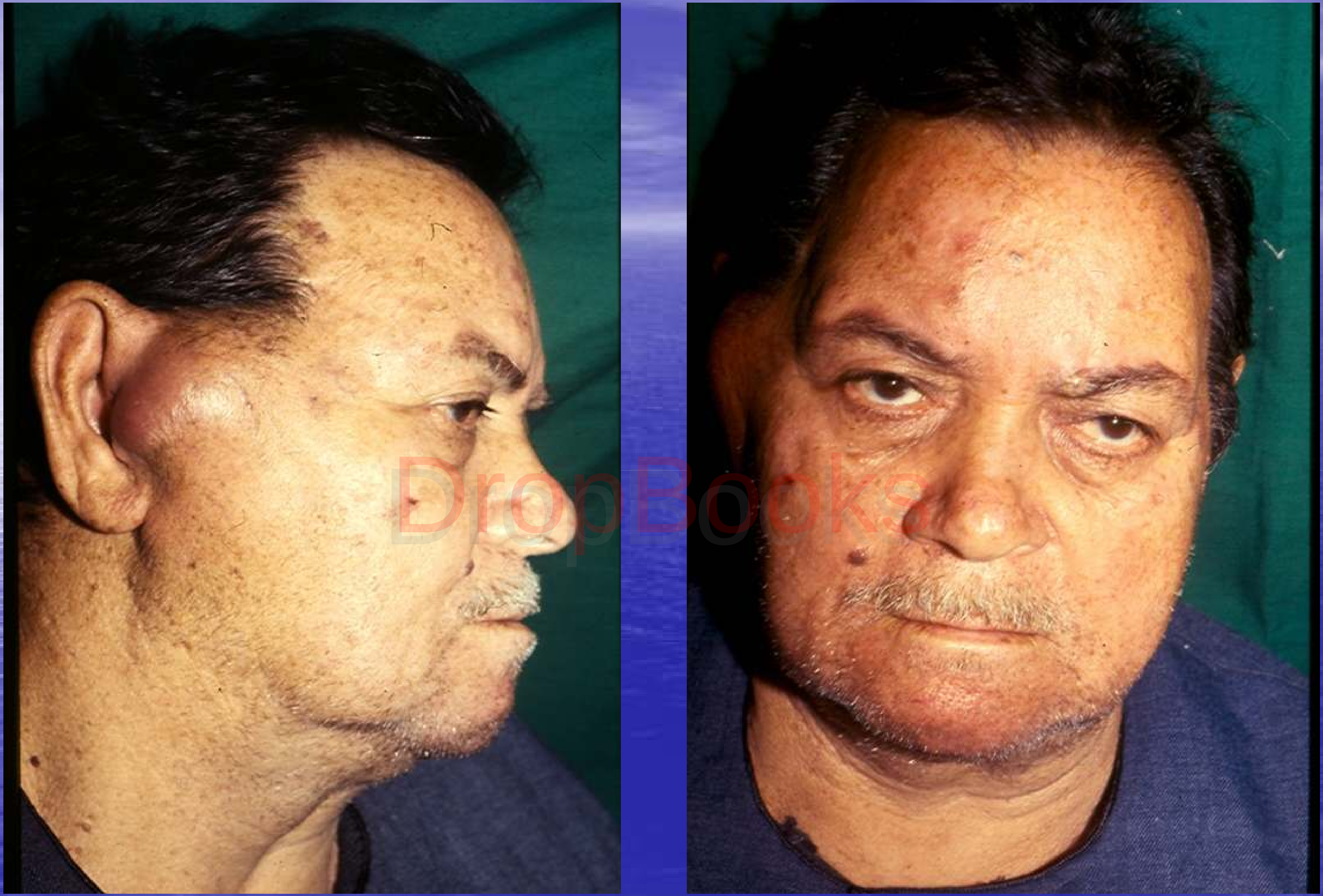

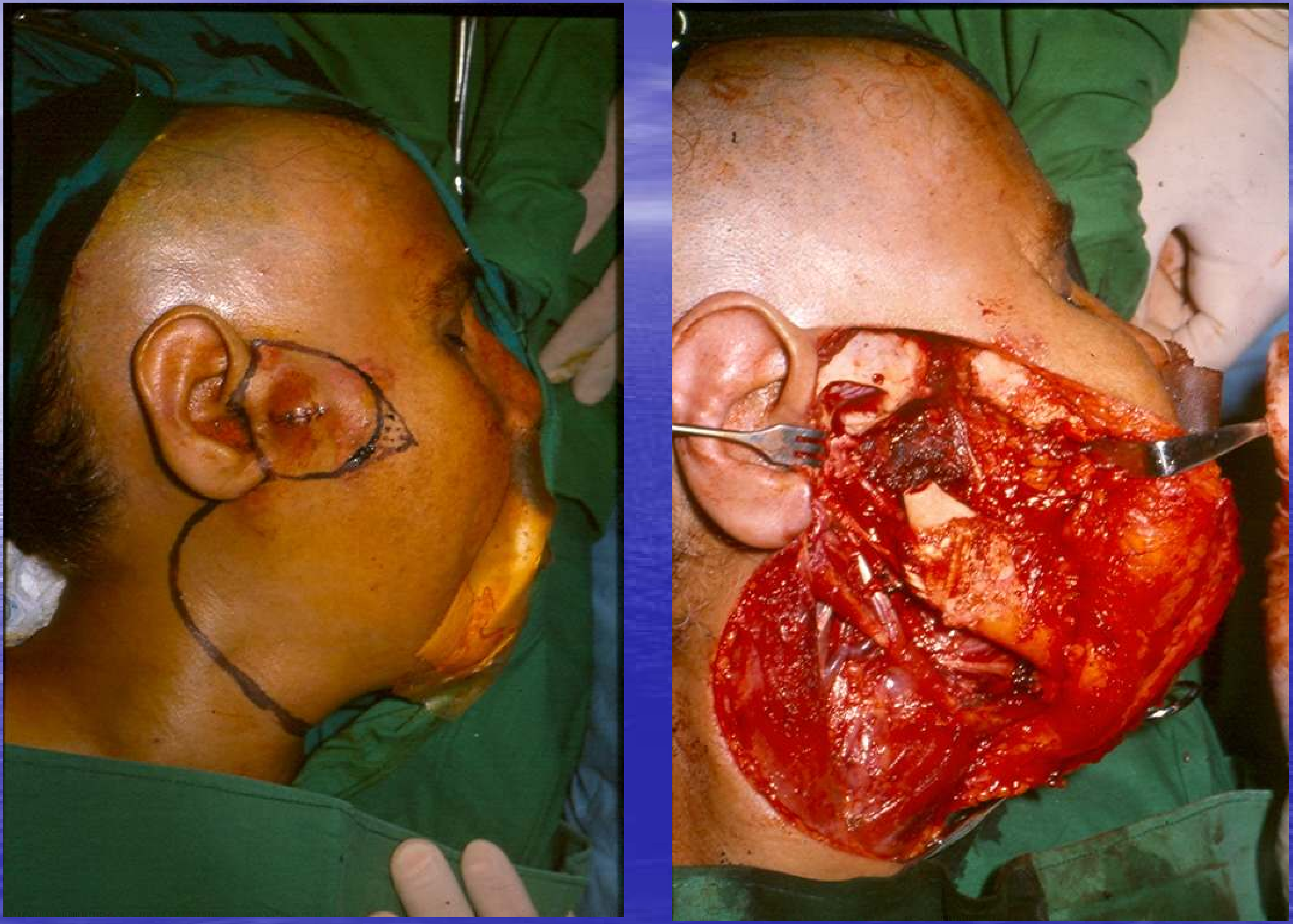

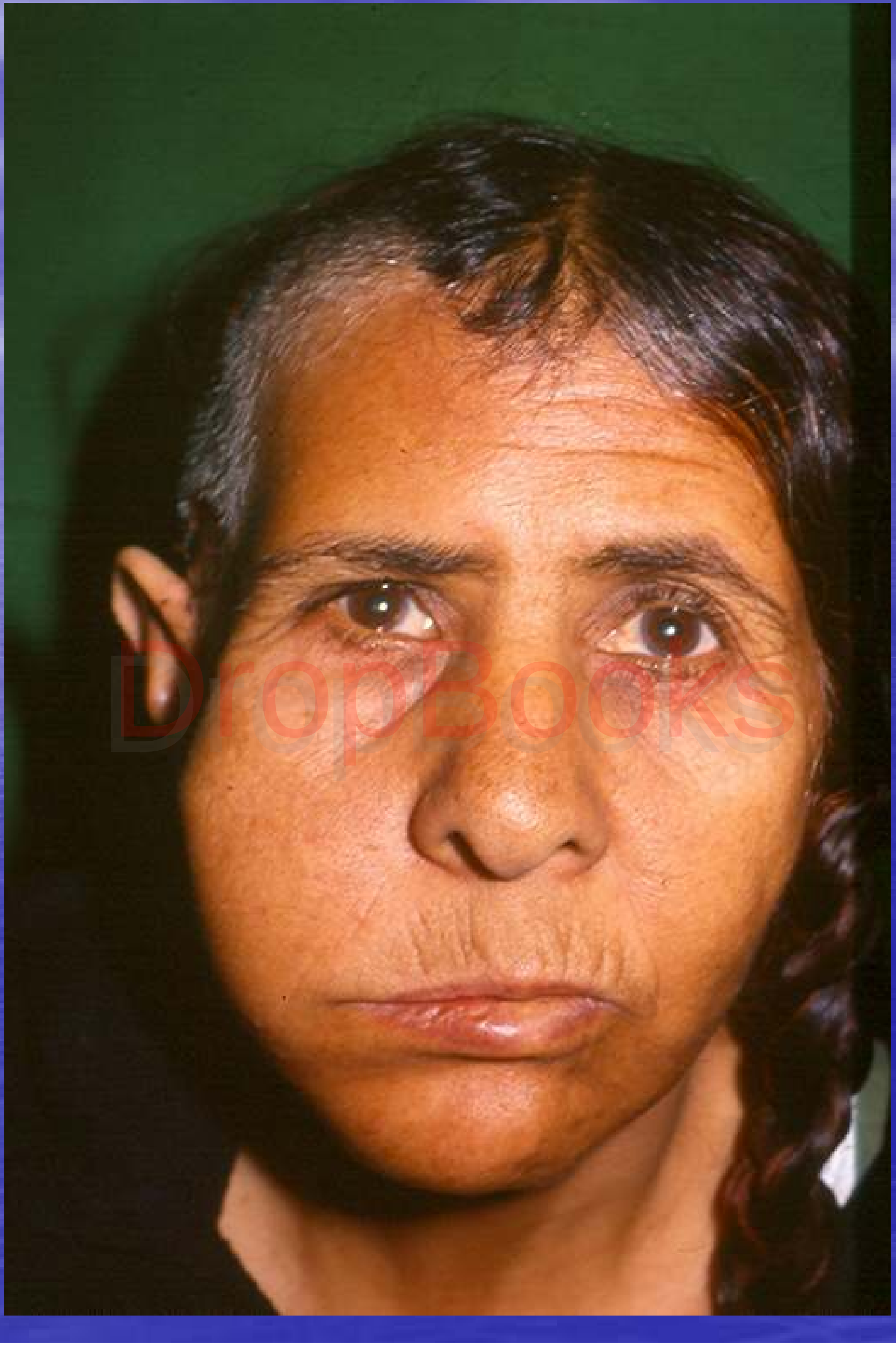

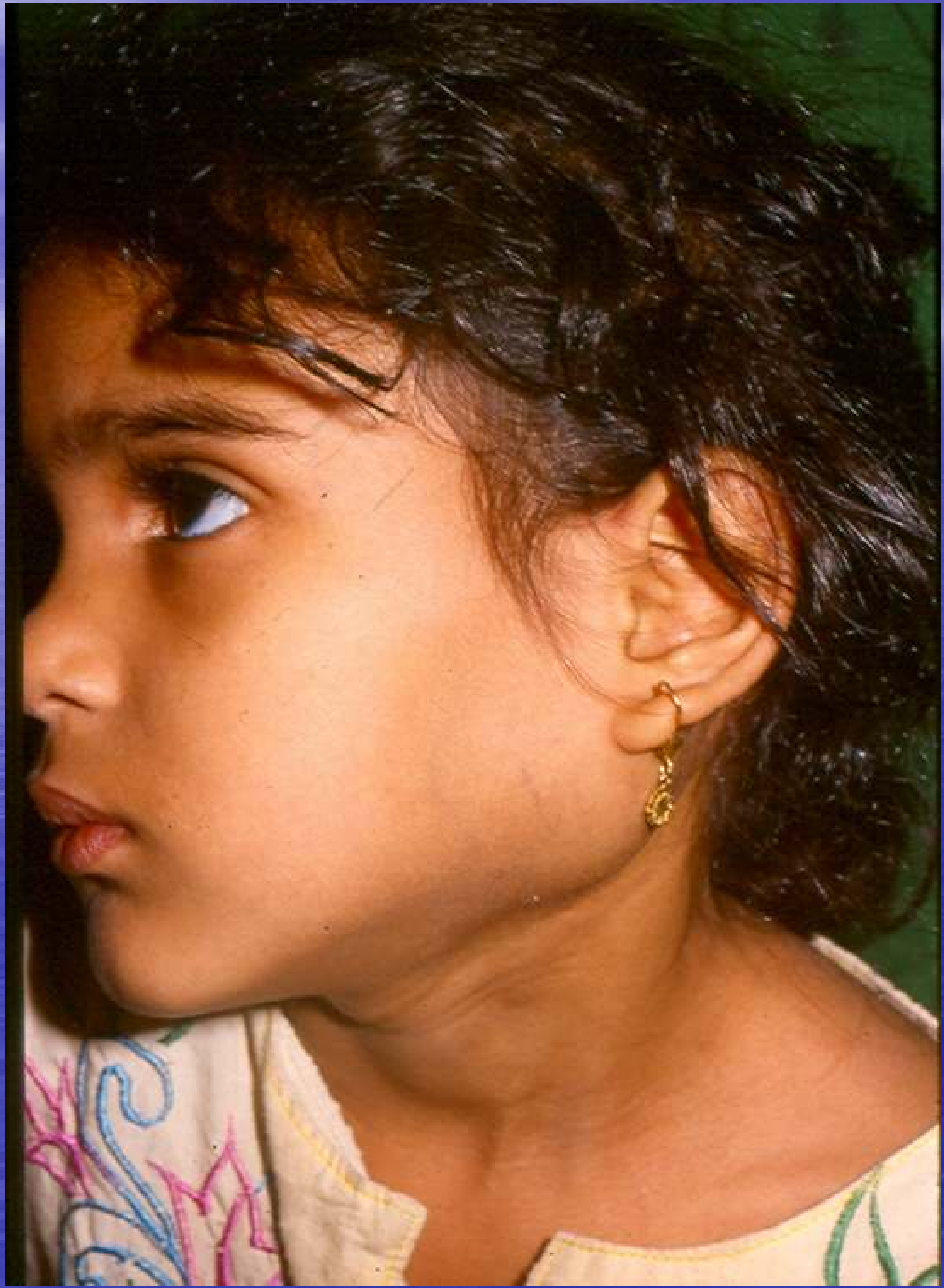

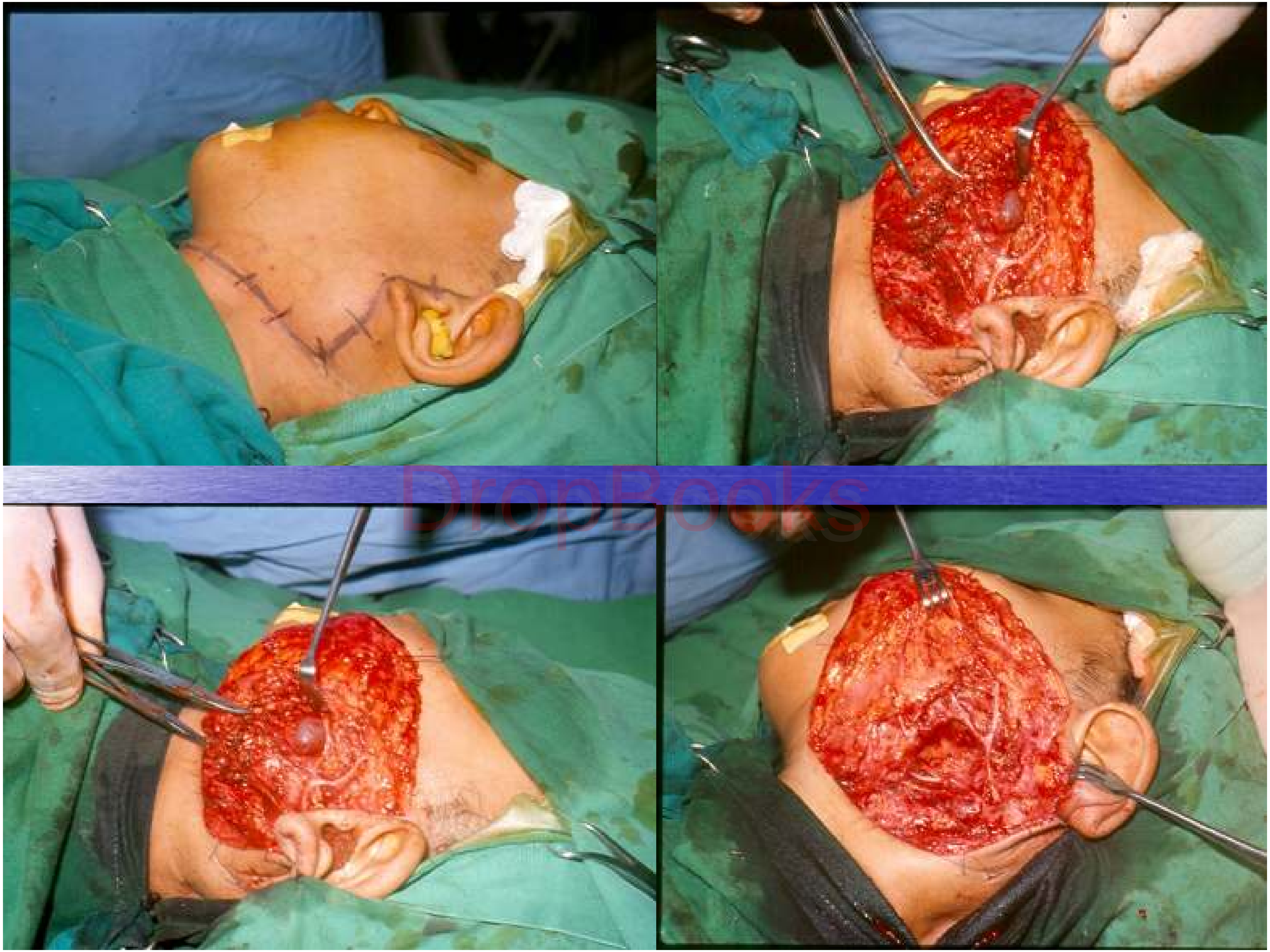

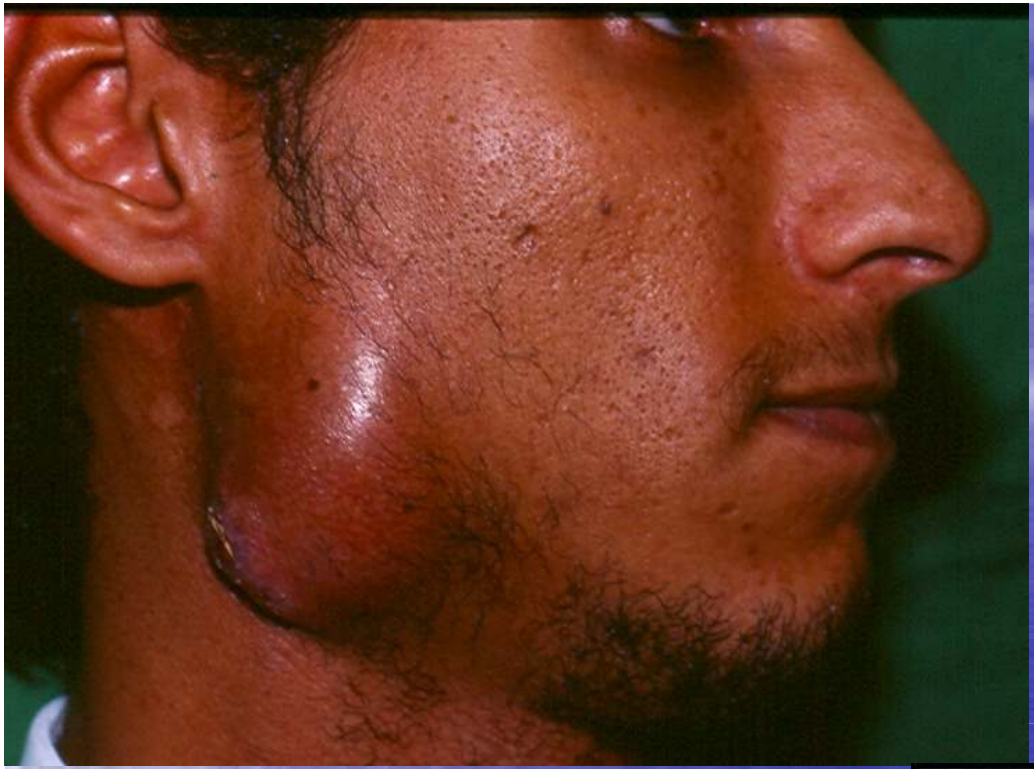

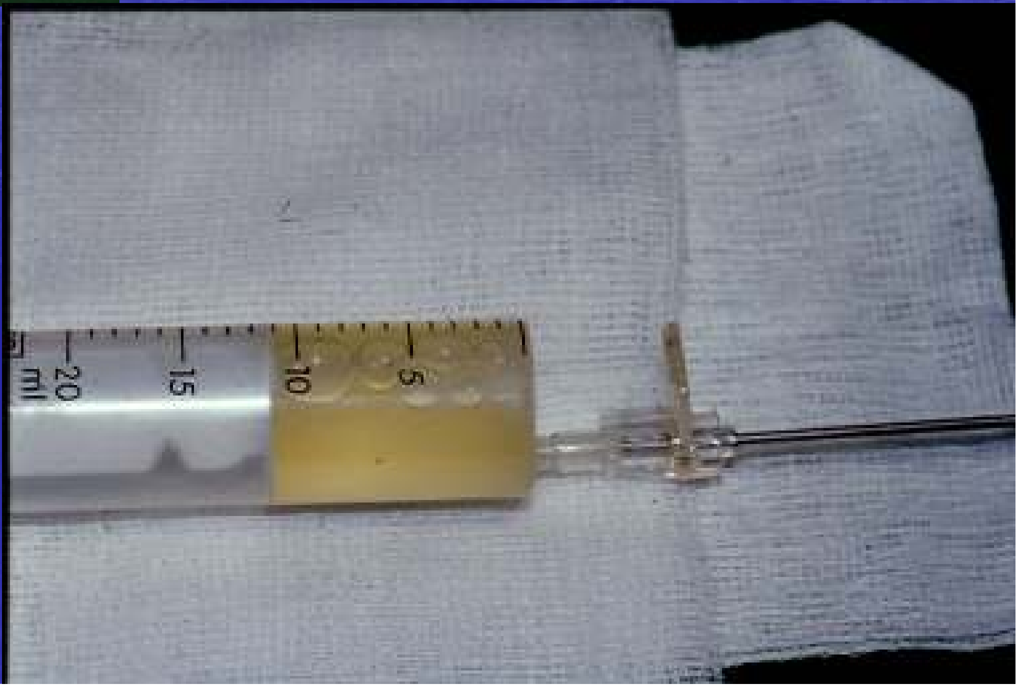
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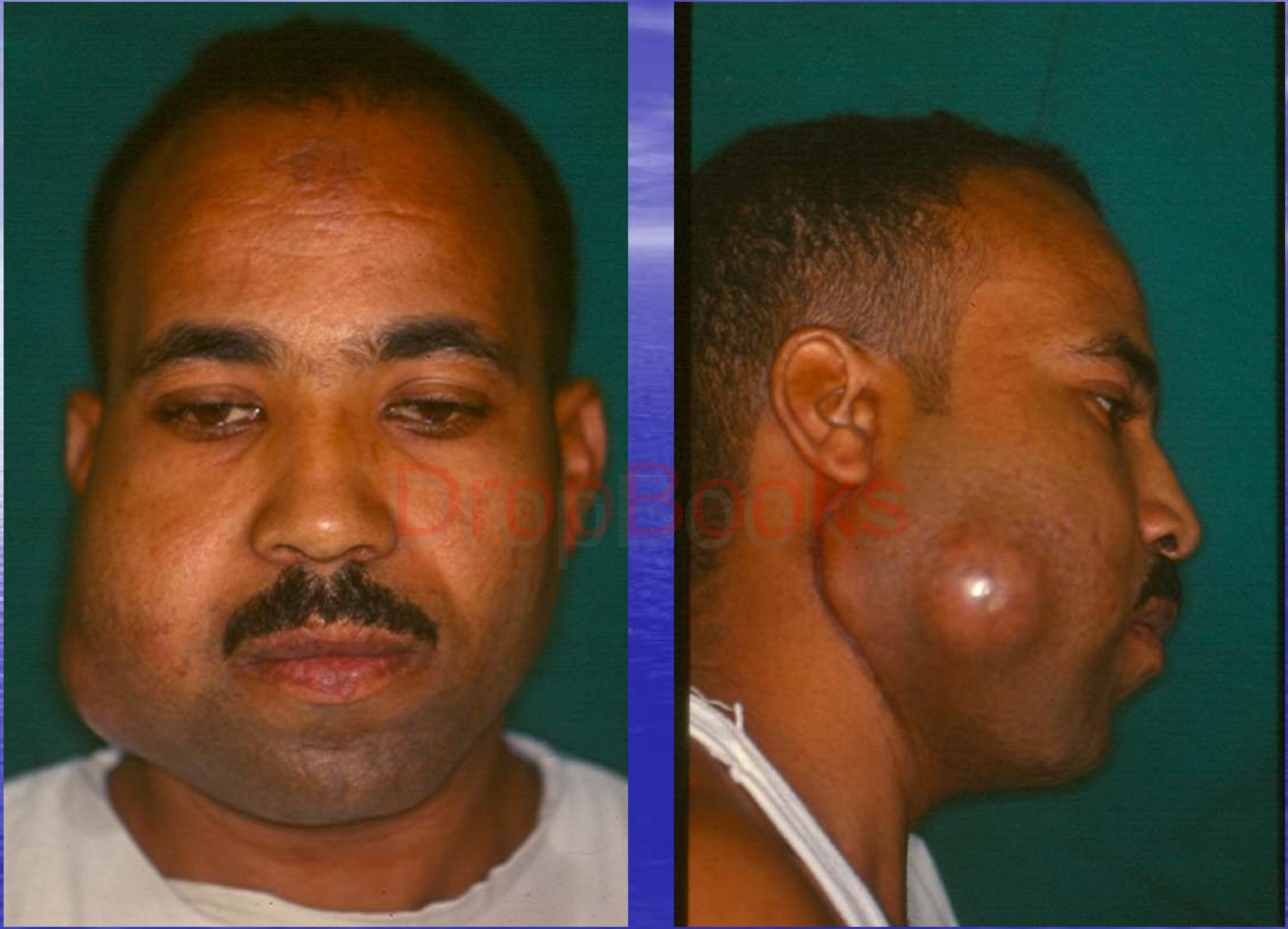

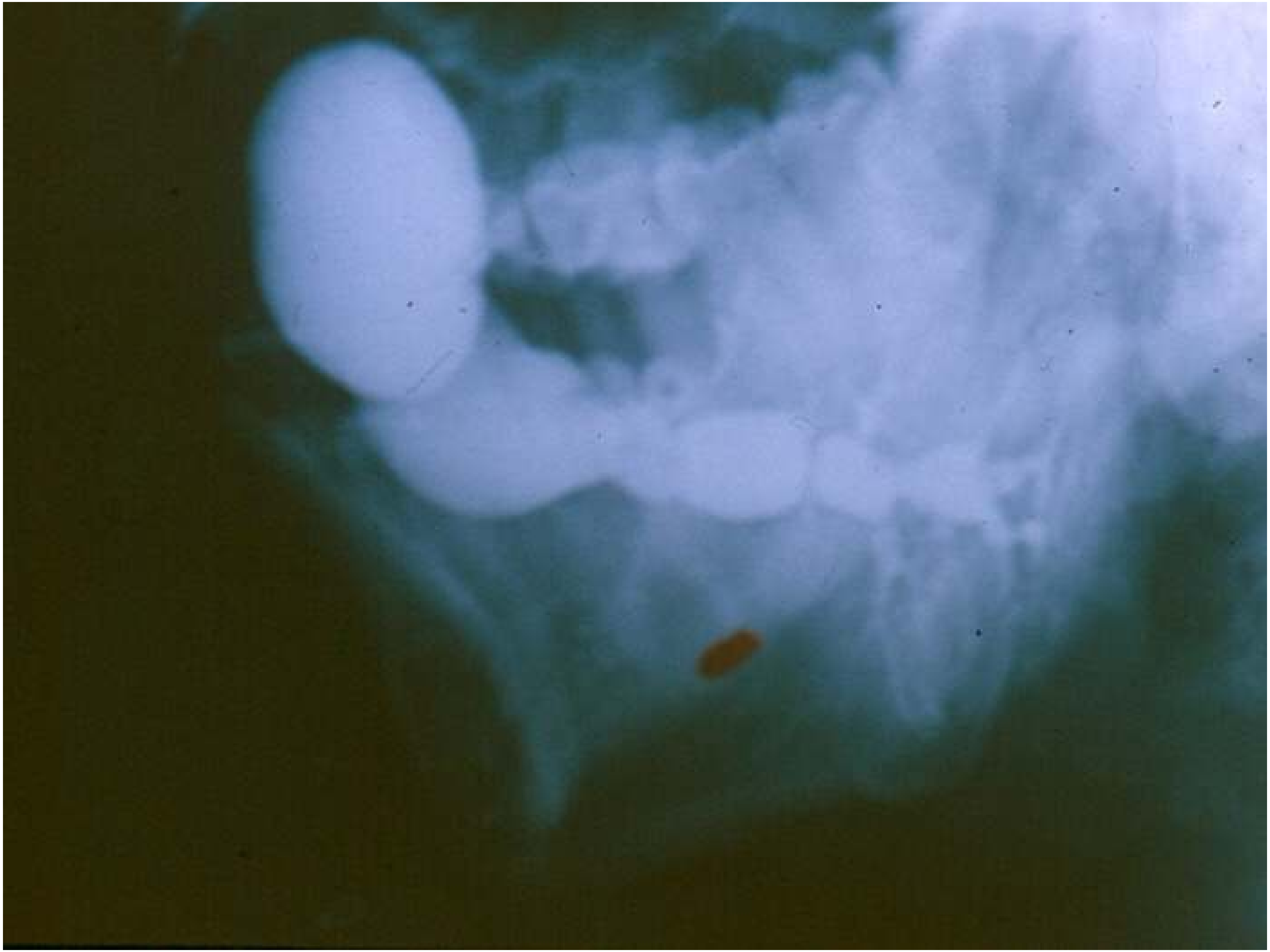

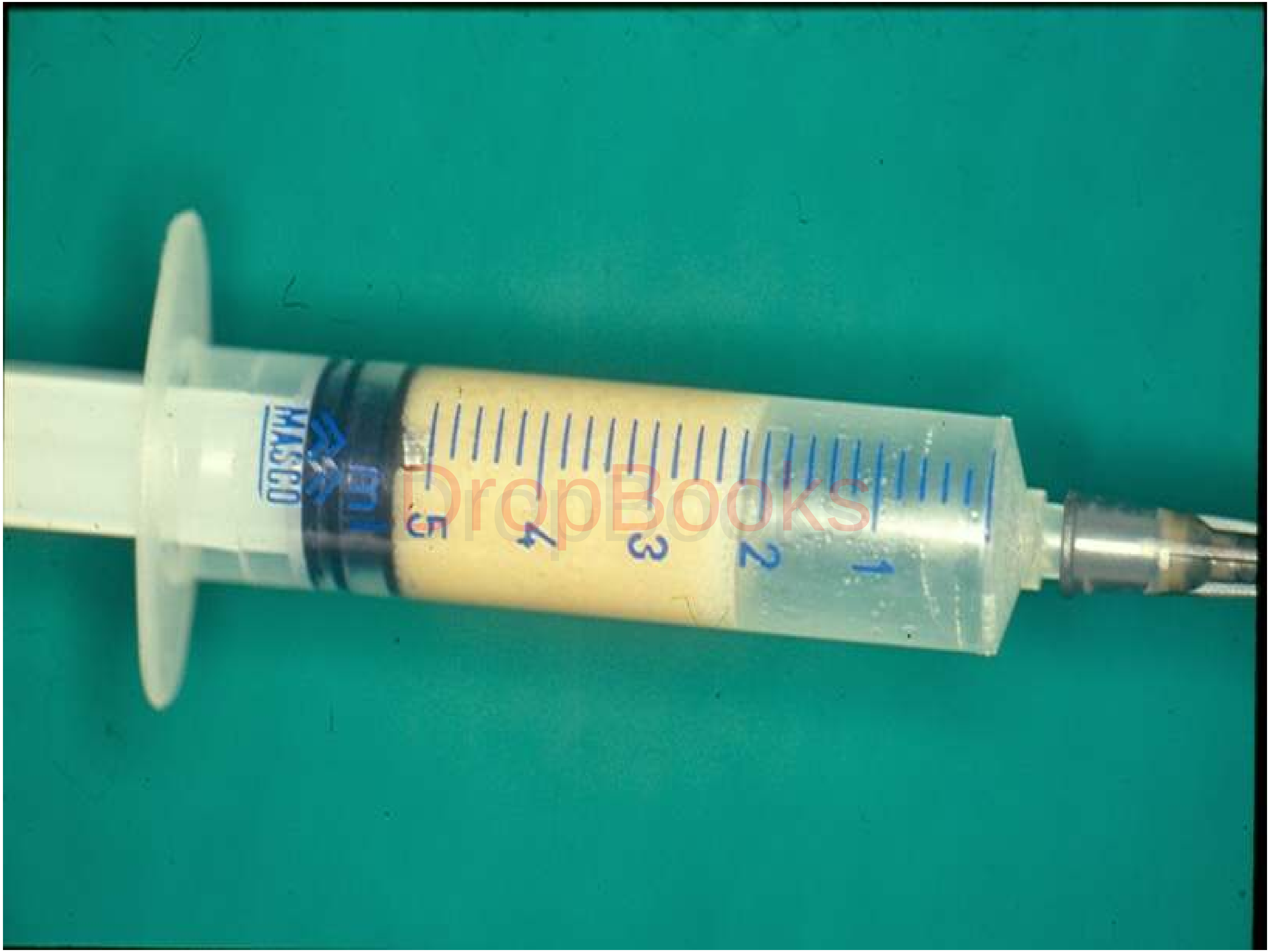
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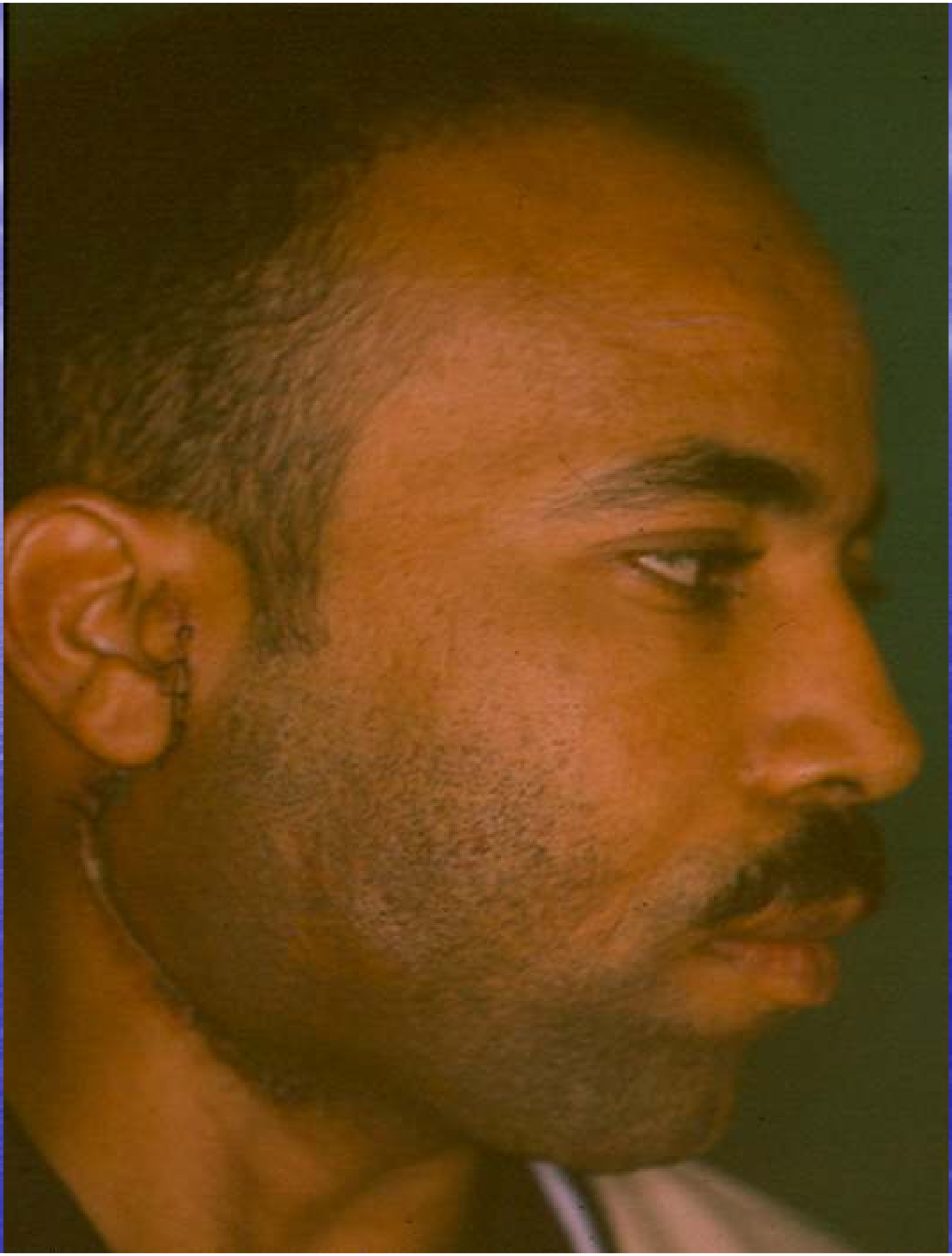

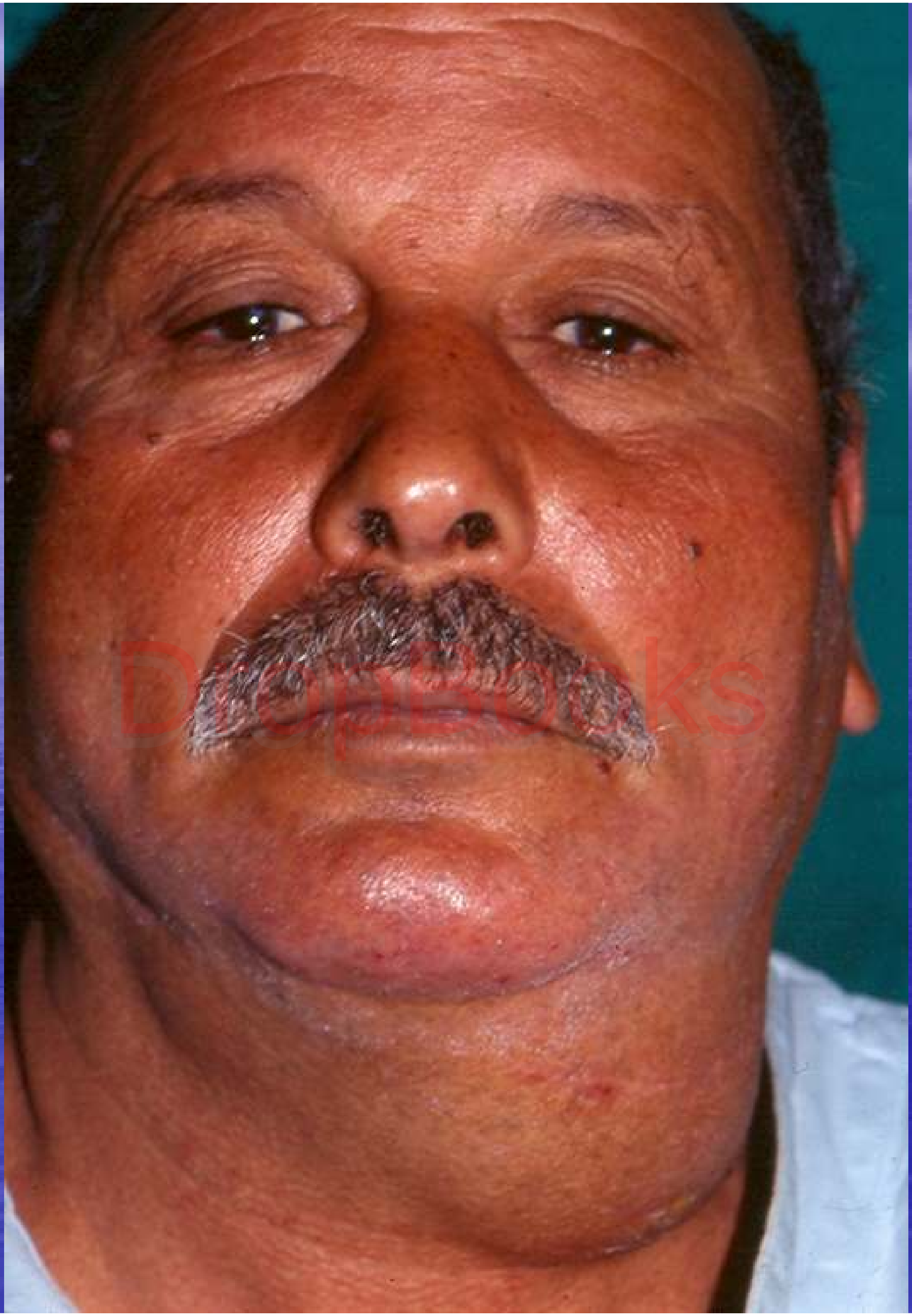

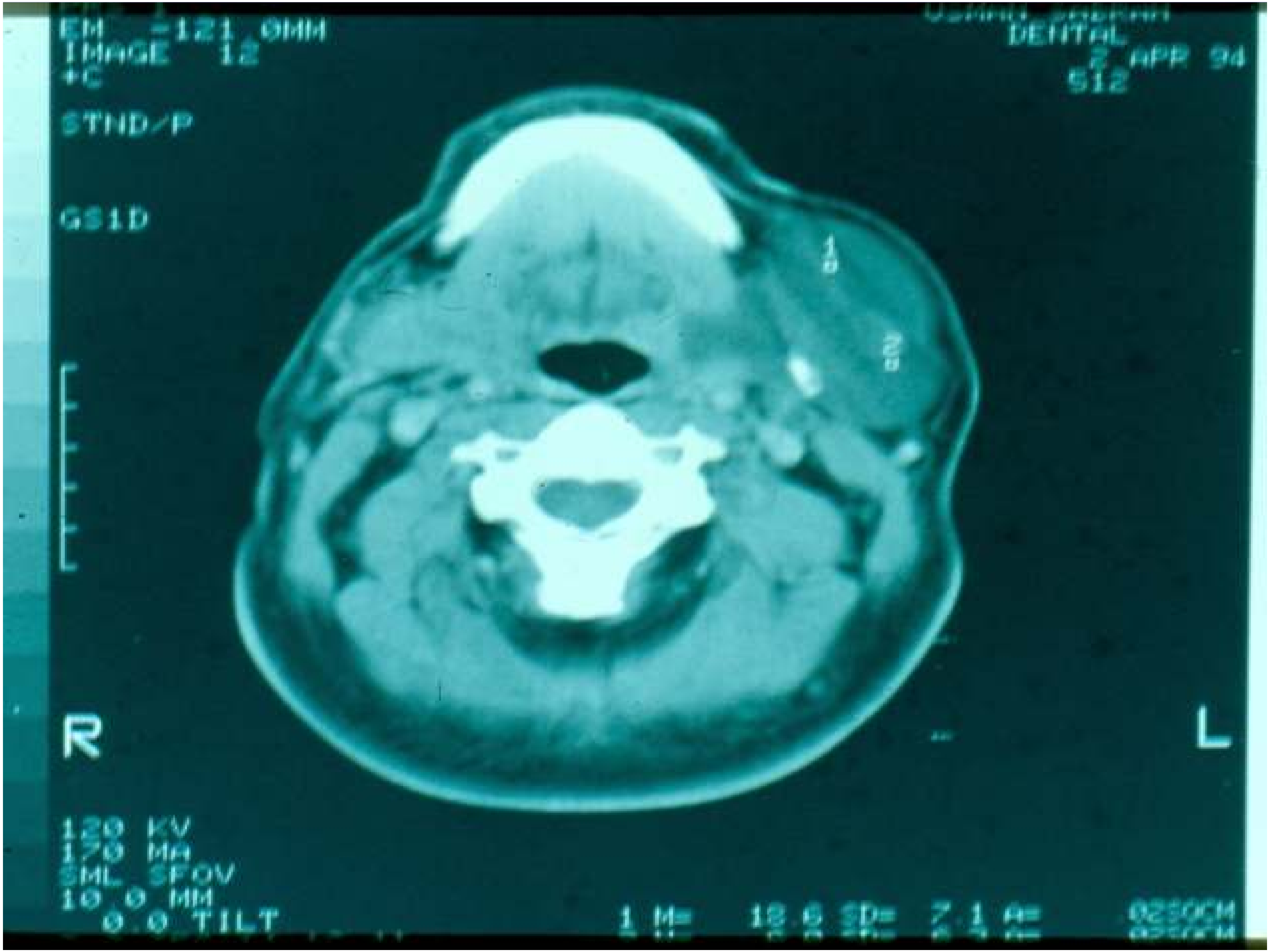
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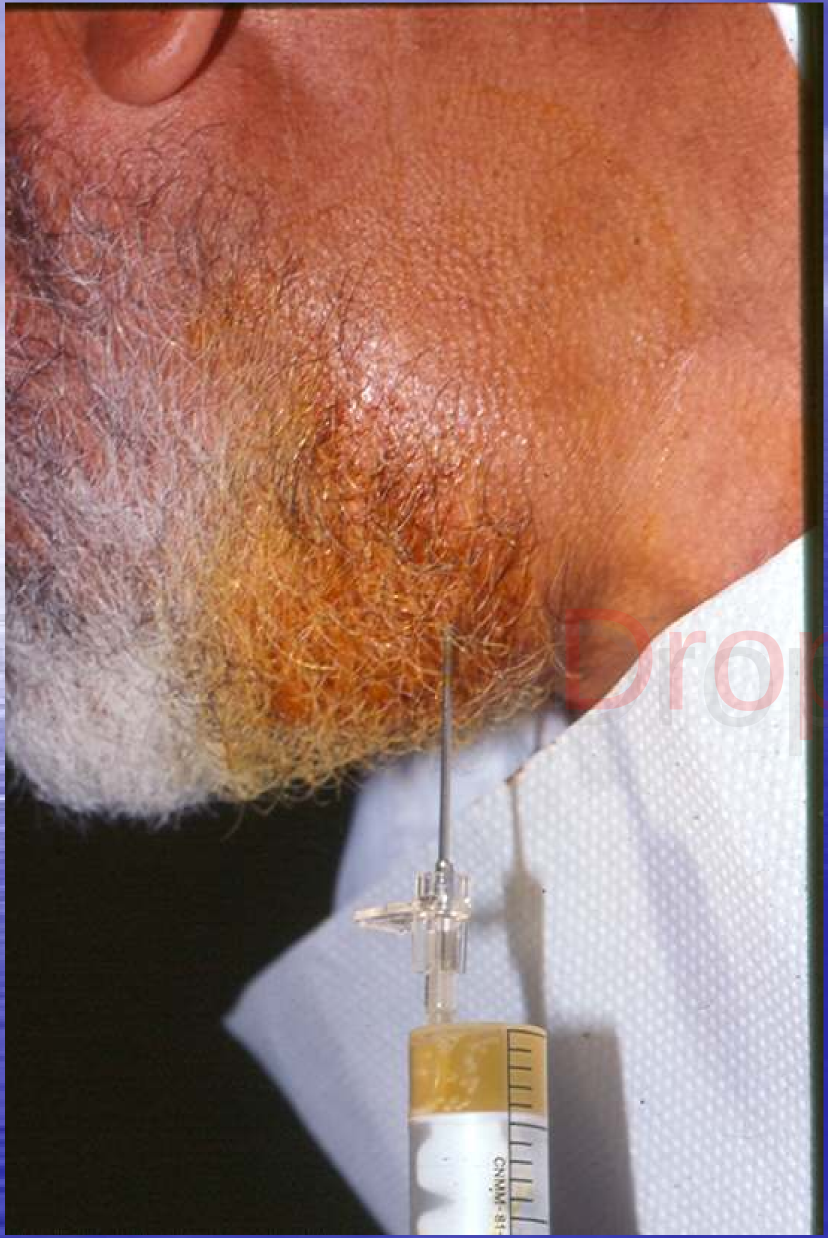

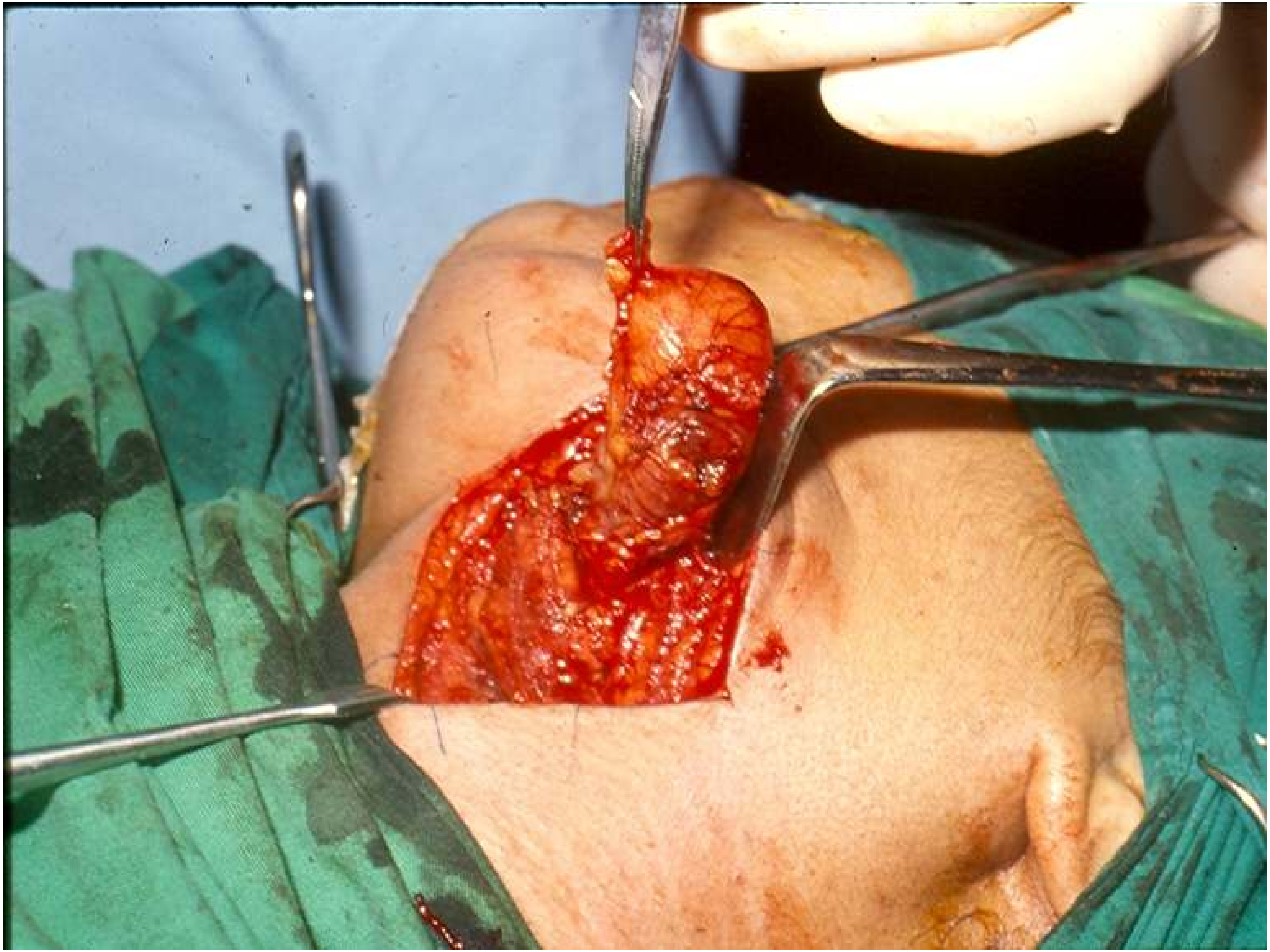

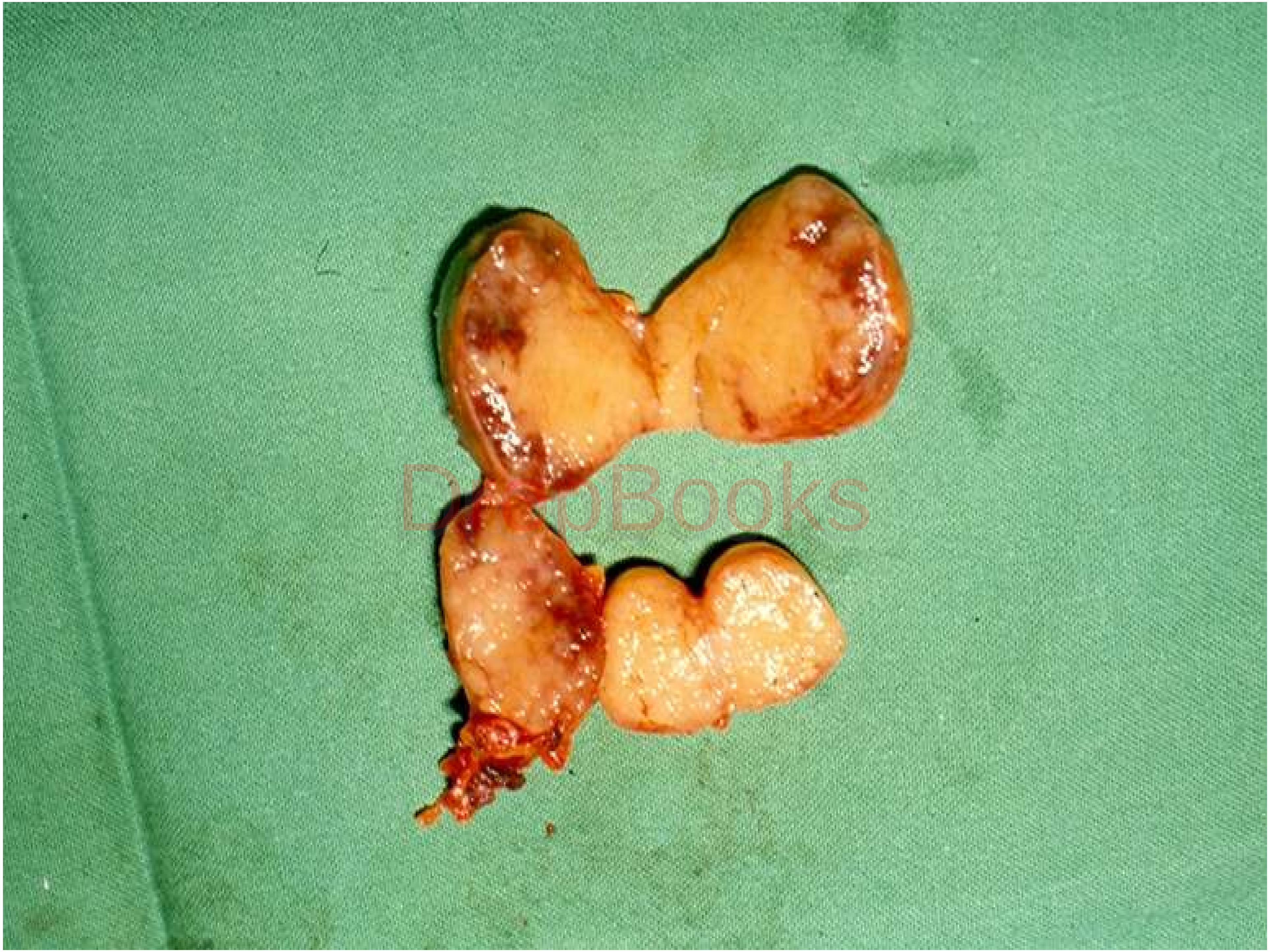

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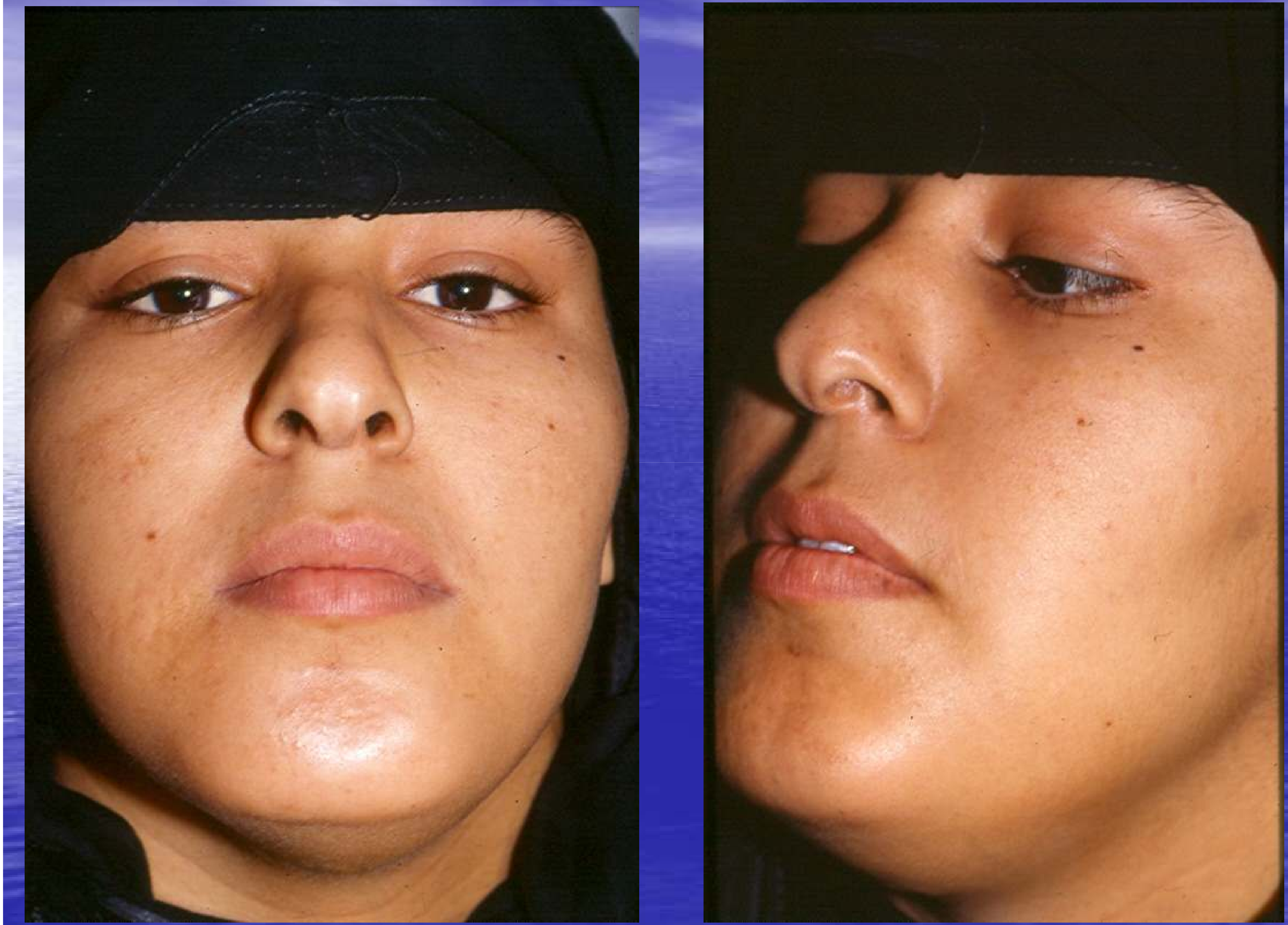

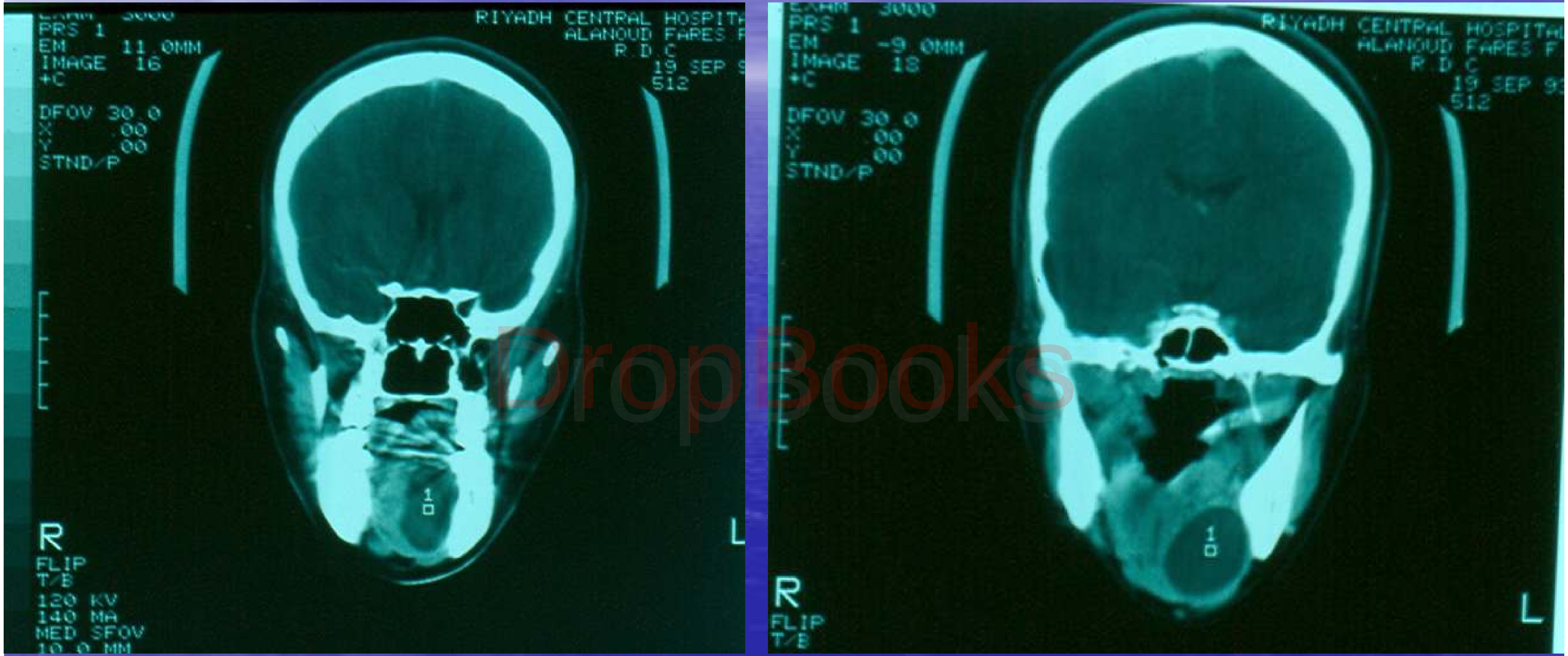
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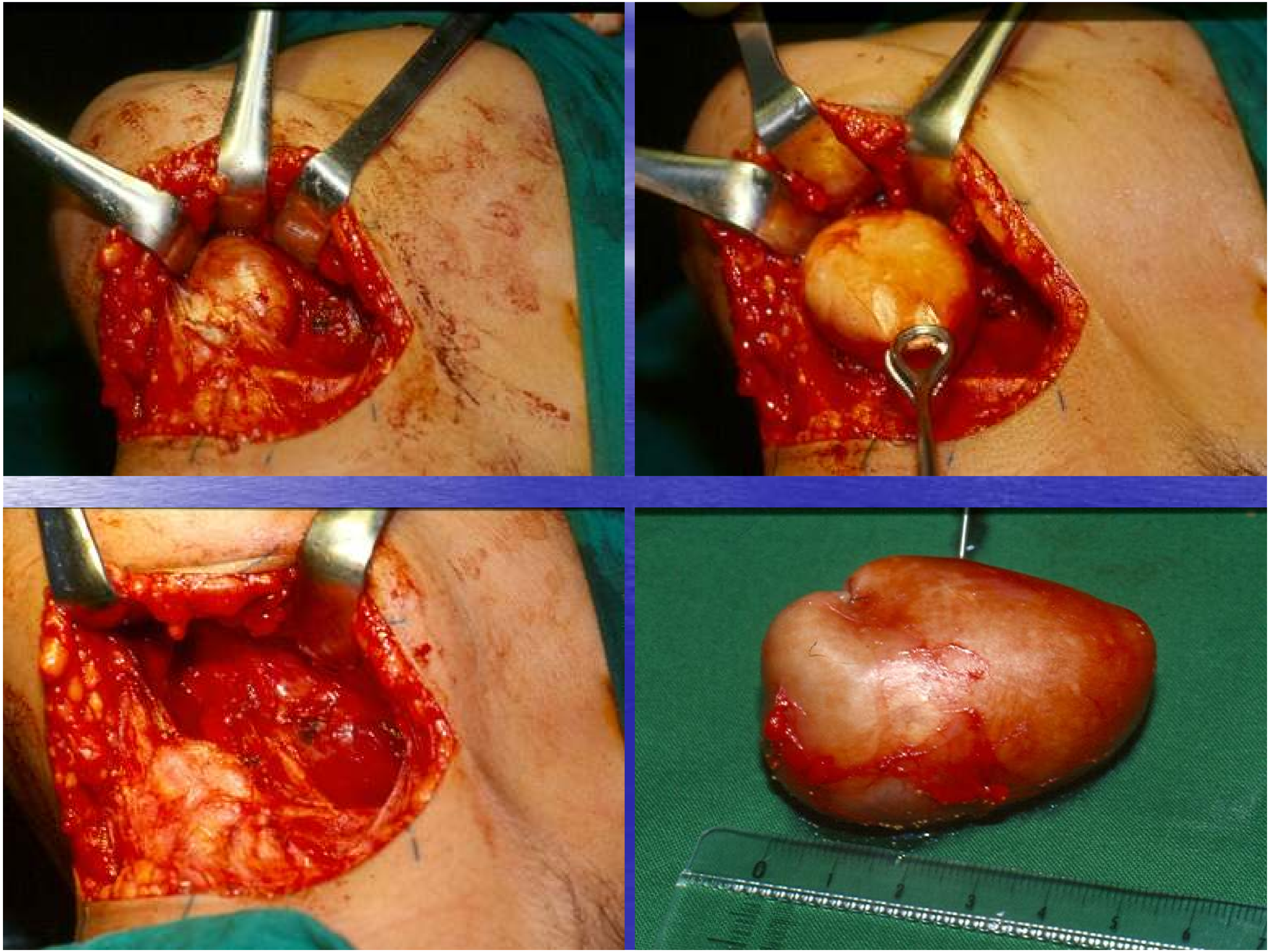
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